Appendix J Comments on the Draft EIS

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OTHER AGENCY AND NON-GOVERNMENT ORGANIZATION COMMENTS

INDEX BY COMMENT ID NUMBER

INDEX BY NAME OF ORGANIZATION

1476

SunZia Southwest
TRANSMISSION PROJECT

COMMENT FORM

U.S. Department of the Interior
Bureau of Land Management
New Mexico State Office

Draft Environmental Impact Statement and Resource Management Plan Amendments (May 2012)

NAME: MATHEW MITCHELL (RIO GRANDE AG LAND TRUST)
ADDRESS: P.O. BOX 338
CITY: SAN ANTONIO STATE: NM ZIP: 87832

Organization (if applicable): RGALT
Add to mailing list: X Yes ☐ No
Withhold personal information*: ☐ Yes ☐ No
Receive notification of EIS availability?: ☐ Yes ☐ No

COMMENTS:

1

THE PROPERTY OF RONALD THOMAS & JANET BROOK IS VERY CLOSE TO THE "PREFERRED" ROUTE. THE RIO GRANDE AGRICULTURAL LAND TRUST (MY ORGANIZATION) HOLDS A CONSERVATION EASEMENT ON THEIR PROPERTY AND WE ARE LEGALLY BOUND TO PROTECT THE CONSERVATION VALUES OF THE PROPERTY. MAKE SURE YOU KNOW WHERE THIS PROPERTY IS LOCATED! THE LEGAL DESCRIPTIONS OF ALL OUR CONSERVATION EASEMENTS WERE PROVIDED AT THE FIRST MEETING

YOU MAY CONTACT ME AT (505) 480-2041 OR RGALT AT (505) 270-4421

Attach additional pages, if needed.

SEND COMMENTS TO:

SunZia Southwest Transmission Project | c/o EPG, Inc. | 4141 N. 32nd Street, Suite 102 | Phoenix, AZ 85018

**Copies of comments will be available for public review. Individuals requesting their personal information be withheld from public review or from disclosure under the Freedom of Information Act must check "YES" in the appropriate box. Such requests will be honored to the extent allowed by law.*

1476	Response to Comment
1	A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.

1477	Response to Comment
1	A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS.

1477

1477

SunZia Southwest

TRANSMISSION PROJECT

COMMENT FORM

U.S. Department of the Interior
Bureau of Land Management
New Mexico State Office

Draft Environmental Impact Statement and Resource Management Plan Amendments (May 2012)

NAME: Cecilie Rosacker McCord / Rio Grande Agriculture Land Trust
Organization (if applicable)
ADDRESS: PO BOX 40043
CITY: Albuquerque, STATE: NM ZIP: 87823

Add to mailing list ☐Yes ☐No
Withhold personal information* ☐Yes ☐No
Receive notification of EIS availability? ☐Yes ☐No

COMMENTS:

[1] Rio Grande Agricultural Land holds a number of conservation easements (CE) that will be impacted by this proposed route (as many as 5 CE). All of these CE, in the Escondida area, are being managed for wildlife and riparian habitat protection. Four of these CEs in the Escondida area have received 10's of thousands $ of both State and federal dollars for riparian habitat restoration. ~~We also have~~ These CE's were purchased with ~~BOTH~~ State and Federal dollars amounting to 100's of thousands $. Funding coming from USFWS North Amer. Wetland Conservation Act Funding and NM Land, Water and Conservation easement funding. We have just been selected $1M grant for NAWCA funding ~~for~~ a number of other conservation easements. We collaborate extensively with USFWS NMG&F and other state agencies as well as private landowners to protect this significant and important wildlife & habitat areas, which lie within the Rocky Mtn. Continental ~~Flyway~~ Migratory Bird Flyway. (over)

Attach additional pages, if needed.

SEND COMMENTS TO:
SunZia Southwest Transmission Project | c/o EPG, Inc. | 4141 N. 32nd Street, Suite 102 | Phoenix, AZ 85018

Copies of comments will be available for public review. Individuals requesting their personal information be withheld from public review or from disclosure under the Freedom of Information Act must check "YES" in the appropriate box. Such requests will be honored to the extent allowed by law.

1477

We also have a conservation easement on a ranch, Sawmill Canyon Ranch, adjacent to the BLM Rewis Backbone Wilderness Study Area. This ranch consists of 40,000 deeded acres and 10,000 leased acres. The ranch is managed for wildlife and provides a very important East West corridor from the Magdalena mountains to the Rio Grande Valley.

FROM

First Class Postage Required

SunZia Southwest Transmission Project
c/o EPG, Inc.
4141 North 32nd Street, Suite 102
Phoenix, AZ 85018

1477	Response to Comment
	See following page(s)

1512

Robson COMMUNITIES

Peter M. Gerstman
Executive Vice President
General Counsel
(480) 895-4297
Email: Peter.Gerstman@Robson.com

August 13, 2012

Via e-mail and US Mail

Bureau of Land Management, New Mexico State Office
P.O. Box 27115
Santa Fe, New Mexico 87502-0115

Re: SunZia Southwest Transmission Project

Dear Sir or Madam:

1 I am writing this letter on behalf of Robson Ranch Mountains, LLC ("Robson") to object to the Bureau of Land Management's preferred routing for the proposed SunZia Southwest Transmission Lines as that routing is set forth in the proposed Environmental Impact Statement. The portion to which we object is located north of Oracle Junction in Pinal County, Arizona, between Arizona highway 77 and Arizona State highway 79. An aerial photo of the area at issue is attached to this letter. The BLM's proposed route in this area is part of the sub-route identified in the BLM's draft environmental impact statement for this project as sub-route 4C2c.

Robson is the developer of SaddleBrooke Ranch, a master-planned active adult community that, upon full build-out, is expected to encompass in excess of 2500 acres and more than 5,000 homes. The vast majority of the SaddleBrooke Ranch property, including the portion of SaddleBrooke Ranch that the BLM-preferred route crosses, has been zoned, is subject to a planned area development overlay district ("PAD") and is subject to a Phased Protected Development Right Plan with Pinal County, and a substantial portion of the project has already been developed. We only just became aware of the SunZia project.

Robson has invested tens of millions of dollars in the SaddleBrooke Ranch project, which currently includes, among other things, a sales and design center with 10 furnished models (plus an additional model under construction), an 18-hole championship golf course with putting green and driving range, and a fitness center and spa of over 40,000 square feet that include indoor and outdoor swimming pools, men's and women's hair salons, massage rooms, aerobics and yoga facilities, a learning center, a creative arts room, billiards, and lighted tennis courts and pickleball courts. In addition, a Robson affiliate has invested millions of dollars to construct a wastewater treatment facility that treats raw sewage to drinking water standards for recharge to the aquifer and golf course irrigation. The PAD and master plan provide for additional amenities and facilities, including golf and homes, in the vicinity of the area that would be traversed by the BLM-preferred SunZia route.

2 The addition of two 500 kv transmission lines in the northerly portion of SaddleBrooke Ranch has the potential to significantly affect and impair future development of the project, particularly within the northerly portion of the master plan. Although we have not made any attempt to evaluate the need for the SunZia project, we understand the general need for appropriate infrastructure to support future development and we support efforts to meet that need. Affiliates of Robson have cooperated fully in the past in the location of electric transmission lines through other Robson Resort Communities when necessary and where

9532 East Riggs Road • Sun Lakes, Arizona 85248 • Telephone: (480) 895-9200 Fax: (480) 895-5455
Robson Ranch-Arizona • PebbleCreek •Sun Lakes • SaddleBrooke • The Preserve • SaddleBrooke Ranch • Quail Creek • Robson Ranch-Texas

1512	Response to Comment
1	Comment noted
2	During final route engineering and design, minor modifications or adjustments to the route can be considered as mitigation.

1512

2 appropriate. This, however, is a different case. Without commenting on the vast majority of the BLM's preferred route, there are relatively small adjustments that could be made to the route in the vicinity of SaddleBrooke Ranch that would have significant and positive effects for SaddleBrooke Ranch and for Pinal County.

We understand that there are many considerations and interests the BLM must balance when choosing a route. However, the BLM appears not to have given sufficient consideration to the effect of its preferred route on the SaddleBrooke Ranch master plan, the huge investment being placed at risk by Robson in this project, and the employment considerations relating to SaddleBrooke Ranch. Because of our belief in the long-term potential of the SaddleBrooke Ranch location, as demonstrated by the success of the SaddleBrooke community, which is approximately 7 miles from SaddleBrooke Ranch, Robson made a huge investment in SaddleBrooke Ranch even as other homebuilders were closing shop. Studies performed in the past by the Center for Business Research at the Arizona State University College of Business and by the Center for Economic Development and Research at the University of North Texas have confirmed the tremendous economic benefits of a Robson Resort Community for the local economy. The study prepared by ASU in June, 2000 of the economic contributions of SaddleBrooke and SaddleBrooke Ranch estimates that the combined effects of spending for consumer goods and services by households in these two projects upon build-out and the ongoing operations of the homeowners' associations will generate $1.9 billion in expenditures and $1 billion in earnings per year in 1999 dollars, and support 27,500 jobs. This is in addition to all of the direct construction and other jobs during the course of development.

3 The zoning for the entire SaddleBrooke Ranch master plan is vested by virtue of the golf course, streets, infrastructure, amenities and homes already constructed in the southerly portion of SaddleBrooke Ranch. Zoning vests for the entire master plan because a developer would never start a project as massive as SaddleBrooke Ranch without some assurance of the ability of completing it. For similar reasons, we believe it is incorrect to think of real property within the SaddleBrooke Ranch master plan as "undeveloped" in the same sense as the neighboring State land and agricultural land. Development has not yet reached the location of the BLM-preferred route in SaddleBrooke Ranch, but the location is part of a large and ongoing construction and development project in accordance with a master plan.

4 A relatively small adjustment in the routing in the vicinity of SaddleBrooke Ranch, taking the line to the north of SaddleBrooke Ranch before converging with the BLM-preferred route could have a tremendous economic effect, not only for Robson, but also for the County. This change, which is indicated in pink in the attachment, would not have any effect on the route in the vicinity of the San Pedro River. This adjustment would affect only a very small portion of sub-route 4C2e, meaning that the vast majority of sub-route 4C2e could remain the same. We would appreciate the opportunity to work with the BLM, Pinal County and others to effect this minor modification. Of course, the SunZia-preferred route, as well as many sub-routes in Route Group 4, would avoid SaddleBrooke Ranch entirely.

To the extent there is a mailing list or email list of interested parties with respect to the SunZia project, please add my name. Please let me know if you need any additional information in order to assist you in evaluating Robson's request to adjust the proposed route. Thank you.

Sincerely,

Peter M. Gerstman

1512	Response to Comment
3	Comment noted
4	Comment noted. Please see comment No.2.

1515

From: roundriver@gmail.com on behalf of Daniel R. Patterson, SW PEER
To: BLM_NM_SunZia_Project
Subject: Opposed to SunZia proposal
Date: Friday, August 10, 2012 11:48:33 PM

To BLM: I write as a hunter in AZ & NM, and for PEER:

- SunZia and the BLM appear to be greenwashing this line as a renewable energy project, but there is no guarantee that the energy it transmits would be derived exclusively – or even primarily – from renewable energy sources. [1]
- The BLM's preferred route cuts through the San Pedro River Valley, which supports the last major free flowing river in the desert southwest, the main migratory corridor for neo-tropical birds in the West, and the greatest diversity of mammal species in North America.
- The Aravaipa alternative route would impact the Aravaipa Canyon watershed by cutting through it for more than 20 miles, crossing Aravaipa Creek and fragmenting connectivity between two wilderness areas, Aravaipa Canyon Wilderness and Galiuro Wilderness. [2]
- This line threatens to impact many conservation areas where there has been considerable public investment, including Pima County's Six Bar Ranch and A-7 Ranch, both part of the Sonoran Desert Conservation Plan.
- SunZia insists that it can't use existing rights-of-way along Interstate 10 for the alternative route through Tucson; however, their main obstacle to using this route is merely some added time and expense that would affect the company's bottom line. [3]

Say no to the current plan. Please keep us fully informed on this project and your decisions. Thanks. [4]

--
Daniel R. Patterson, Ecologist & Southwest Director
Public Employees for Environmental Responsibility PEER.org
TUS AZ 520.906.2159 | SVC NM 505.216.6576 | USA

1515	Response to Comment
1	As stated in the DEIS (p. 1-7), "Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services..." and reiterated on p 4-274 of the DEIS, "As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service." Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, "it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation" (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.
2	Comment noted. A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor have been added to the FEIS, Section 3.10.3.3, Conservation Easements, In Chapter 3
3	The proposed Project requires a right-of-way width of 400 feet to accommodate two 500 kV transmission lines. There are no existing rights-of-way that could accommodate the Project.
4	Comment noted

1573

From: Daniel Yang
To: BLM_NM_SunZia_Project
Subject: SunZia Transmission Project
Date: Thursday, May 31, 2012 10:30:02 AM

Hi Adrian,

We are developing a 200MW solar project in Cochise County, Arizona, near the town of San Simon, AZ. We are interested in the SunZia project for its ability to deliver our power to the Western Interconnect. It is my understanding you are the BLM Project Manager for the SunZia Project EIS. Questions: Are the SunZia and Southline transmission projects viewed as competing projects by the BLM? What about the segments in Arizona, are they competing? If they are competing, is the driving timeline the later timeline of the Southline Project? What is the current commercial operative date target for the Southline Project? 1

http://www.blm.gov/nm/st/en/prog/more/lands_realty/southline_transmission.html

Since both proposed transmission projects pass by our project, with the Southline Project a few miles closer, we would like to determine a realistic operative date for our project, which is dependent on the earliest operative date of one of these two transmission projects.

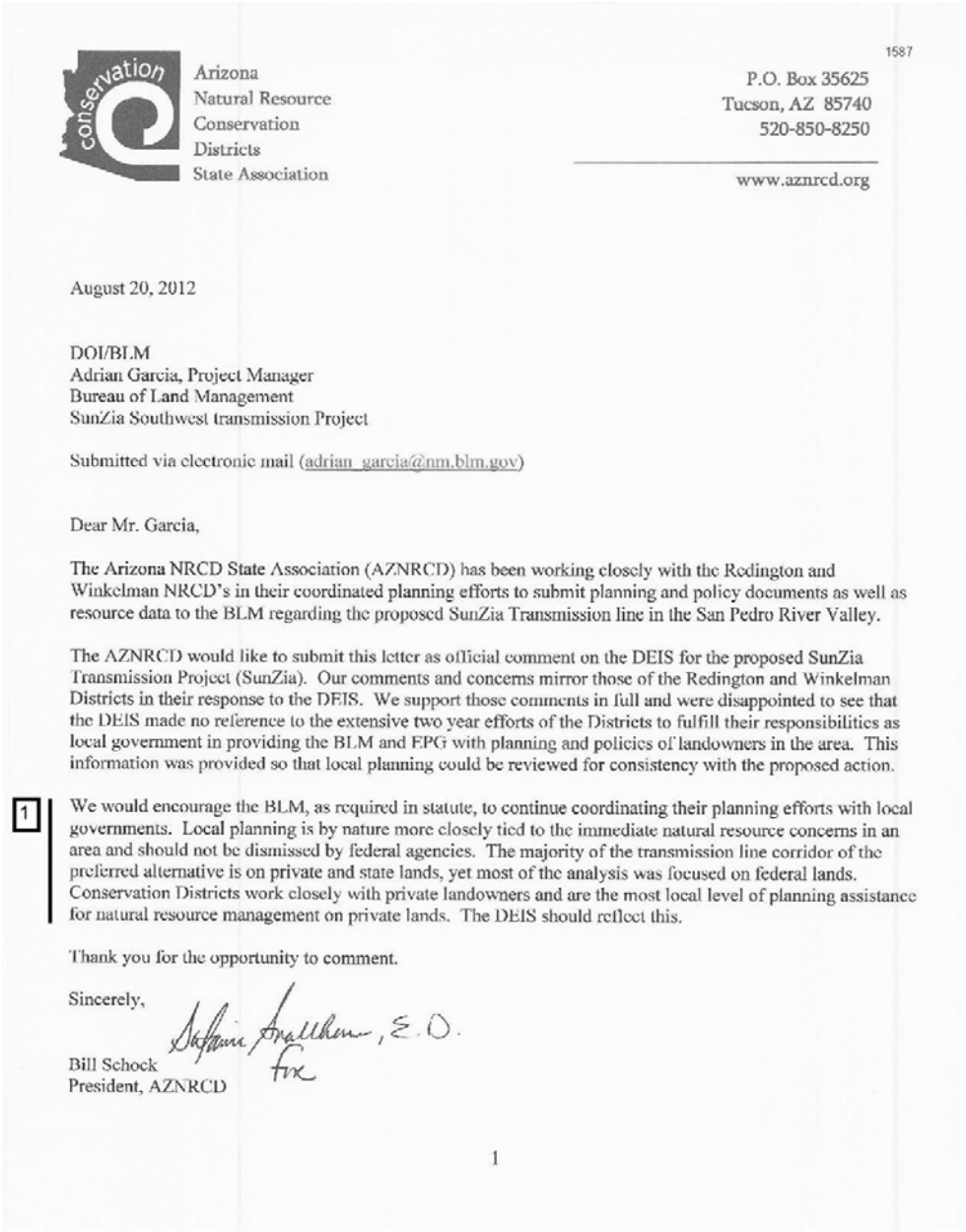
How does the BLM resolve the scheduling issue that these two transmission projects bring up, in that they appear to be competing for the same routing through southern Arizona? 2

Thank you in advance for your responses to these questions.

Best regards,

Daniel Yang
Managing Director
RPV Partners, LLC

1573	Response to Comment
1	Southline Transmission Project is not considered an alternative or competing project to the SunZia Southwest Transmission Project. The proposed Southline Transmission Project (345 kV), located between southwestern New Mexico and southeastern Arizona, could transport additional electricity generated from sources in those areas; however, the purpose and need for the Southline project is different than for the SunZia Project. The Southline project's capacity would be limited to that which could be accommodated by a 345 kV transmission line and constructed within portions of Western Area Power Administration's existing rights-of-way.
2	Please see response to Comment No. 1.



1587

Arizona
Natural Resource
Conservation
Districts
State Association

P.O. Box 35625
Tucson, AZ 85740
520-850-8250

www.aznrcd.org

August 20, 2012

DOI/BLM
Adrian Garcia, Project Manager
Bureau of Land Management
SunZia Southwest transmission Project

Submitted via electronic mail (adrian_garcia@nm.blm.gov)

Dear Mr. Garcia,

The Arizona NRCD State Association (AZNRCD) has been working closely with the Redington and Winkelman NRCD's in their coordinated planning efforts to submit planning and policy documents as well as resource data to the BLM regarding the proposed SunZia Transmission line in the San Pedro River Valley.

The AZNRCD would like to submit this letter as official comment on the DEIS for the proposed SunZia Transmission Project (SunZia). Our comments and concerns mirror those of the Redington and Winkelman Districts in their response to the DEIS. We support those comments in full and were disappointed to see that the DEIS made no reference to the extensive two year efforts of the Districts to fulfill their responsibilities as local government in providing the BLM and EPG with planning and policies of landowners in the area. This information was provided so that local planning could be reviewed for consistency with the proposed action.

1 We would encourage the BLM, as required in statute, to continue coordinating their planning efforts with local governments. Local planning is by nature more closely tied to the immediate natural resource concerns in an area and should not be dismissed by federal agencies. The majority of the transmission line corridor of the preferred alternative is on private and state lands, yet most of the analysis was focused on federal lands. Conservation Districts work closely with private landowners and are the most local level of planning assistance for natural resource management on private lands. The DEIS should reflect this.

Thank you for the opportunity to comment.

Sincerely,

Stefanie Smallhouse, E.O.
for

Bill Schock
President, AZNRCD

1

1587	Response to Comment
1	It is acknowledged that the majority of the preferred alternative transmission line corridor is on private and state lands in Arizona. The DEIS analysis was conducted to address impacts at the same level of detail that could occur on all segments of each of the alternative corridors, irrespective of land ownership. It may appear that more of the analysis in the DEIS was focused on federal lands because there are established management guidelines for impact assessment on federal lands, such as Visual Resource Management Objectives, that require more extensive documentation.

1588

Board of Supervisors

August 9, 2012

Mr. Adrian Garcia, BLM Project Manager
Bureau of Land Management
SunZia Transmission Line Project
P.O. Box 27115
Santa Fe, NM 87502-0115
NMSunZiaProject@blm.gov

RE: BLM's Preferred Alternative in the SunZia Draft EIS, issued on May 25, 2012.

Dear Mr. Garcia,

The Cochise County Board of Supervisors would like to thank you for the opportunity to review and comment on the Draft Environmental Impact Statement (DEIS) for the SunZia Transmission Line Project (Project), and welcome participation as a coordinating agency throughout the NEPA process for the Project. *Cochise County respectfully requests formal recognition as a Coordinating Agency via a Memorandum of Understanding (MOU) to memorialize mutual expectations and commitments throughout the NEPA process.*

Cochise County recognizes the myriad benefits that SunZia will provide, including facilitating access to significant renewable energy resources and improving the infrastructure and reliability of regional grid systems. We understand that we share a responsibility to assist the Bureau of Land Management (BLM) in providing assessment of SunZia's alternatives and the potential economic, environmental and social impacts identified alternatives may have on Cochise County. It is critical that the BLM reaches out to stakeholders and potentially affected communities and parties for feedback prior to release of a Final EIS. The County recognizes the effort of the BLM in ensuring thorough review under the National Environmental Policy Act (NEPA) by being receptive to extensive input from numerous stakeholders in central and southern Arizona. The credibility of the process depends on incorporating that feedback into the Final EIS.

1

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www.cochise.az.gov

1588	Response to Comment
1	Comment noted

2 Following the guidelines set forth in the National Environmental Policy Act (NEPA), the DEIS identifies and analyzes a number of alternative routes and includes a Preferred Alternative route selected by the BLM, that being Subroute 4C2c. Cochise County, however, respectfully requests that the BLM select *Subroute 4B* of Route Group 4 as the Preferred Alternative in the Final EIS.

Cochise County believes that Subroute 4B would be a better alternative to minimizing impacts to sensitive rural communities and resources, including the significant archaeological, paleontological and water resources in the lower San Pedro River Valley. In fact, the impact on rural communities from the construction of a major transmission corridor with up to eight 135-foot towers every mile will not be insignificant if Subroute 4C2c is chosen as the Preferred Alternative in the Final EIS.

3 The BLM's Preferred Alternative parallels the San Pedro River for 45 miles, which would result in unnecessary negative impacts on the sensitive riparian habitat and water resources in the lower San Pedro River Valley, long identified as a unique ecosystem with high biodiversity, and the largest and best example of riparian woodland remaining in the Southwest. Subroute 4C2c has more mileage of greater impacts than Subroute 4B with respect to biological and water resources -- Subroute 4C2c is 161 miles long, while Subroute 4B is 133 miles long. With 28 more miles Subroute 4C2c has more impact on the environment than Subroute 4B, and will also encroach upon more wells than Subroute 4B. With more mileage comes more accessory construction, including roads, which would thus have greater ground-disturbing potential than Subroute 4B. What's more, Subroute 4C2c traverses a number of perennial feeder streams which would increase erosion risk. In addition, only 12 miles of the 45-mile portion of Subroute 4C2c that parallels the San Pedro River follows existing linear infrastructure. This is the only area along the San Pedro River where Subroute 4C2c follows an existing linear feature. This is an insignificant co-location of utility corridors, and does not make Subroute 4C2c a more environmentally-sound alternative than Subroute 4B. The BLM's Preferred Alternative would damage the San Pedro River Valley, a precious southern Arizona and national resource. Damage to this watershed will be very difficult to mitigate.

4 We have concerns that Subroute 4C2c would generate undue EMF interference which would consequently impact Ft. Huachuca's Electronic Proving Ground (EPG). It is supremely important to ensure that SunZia does not compromise Ft. Huachuca's mission. Subroute 4B minimizes impacts to military operations by completely avoiding Ft. Huachuca's EPG. In fact, representatives from Ft. Huachuca have indicated that significant mitigation would be required for any 500Kv line that would pass through their designated electronic testing range.

5 In summary, Cochise County believes that Subroute 4C2c's impacts to the San Pedro River Valley and its residents can be avoided by selecting Subroute 4B in the Final EIS. Subroute 4B better satisfies the numerous and varied concerns raised by the public, local governments and elected officials. The SunZia DEIS indicates that Subroute 4C2c was selected to maximize use of existing utility corridors and infrastructure, minimize impacts to sensitive resources, minimize impacts to residential and commercial uses, and minimize impacts to military operations. The County believes that *Subroute 4B* better meets these criteria. Subroute 4B as the Preferred Alternative in the Final EIS avoids additional impacts to water resources, has fewer impacts to

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1588	Response to Comment
2	The BLM acknowledges that there are potentially significant environmental impacts, as well as impacts to rural communities associated with either of the alternative routes (subroutes 4B or4C2c). The BLM Preferred Alternative was selected because it would meet BLM's purpose and need for action; maximize the use of existing utility corridors and infrastructure; and minimize impacts to sensitive resources, river crossings, residential uses, and commercial uses. The BLM's decision will include provisions for mitigation measures to avoid or reduce the impacts to the extent practical.
3	Although the BLM Preferred Route (Subroute 4C2c) is longer than the alternative Subroute 4B, a greater proportion of the route would be consolidated with existing utility corridors, where access for construction could be more available. Impacts to sensitive riparian habitat and water resources have been analyzed for each of the alternatives, and the potential for soil erosion impacts are included in the discussion of Section 4.3.2 of the DEIS. As stated, the application of Standard and Selective mitigation measures described in Section 2.4.12 of the DEIS would be effective to reduce soil erosion and other impacts to riparian habitat and water resources for either of the alternative routes.
4	Comment noted
5	The BLM has identified a Preferred Alternative route, Subroute 4C2c which crosses multiple jurisdictions to include the complete proposed action, based on the rationale provided above (see comment No. 2). However, the BLM's authority is limited to the grant of application for new right-of-way crossing Federal land, and does not have authority to grant right-of-way on state, private or other non-federal lands. A relatively small proportion of the alternative corridors have been surveyed for cultural resources; only the known cultural resources that have been documented in the DEIS studies to date. Intensive cultural resource surveys will be conducted prior to construction of the Project, for which a mitigation plan will be prepared to address treatment of identified cultural resources.

5 visual resources (which would achieve the BLM's visual resource management objectives), avoids any impacts to military missions at the U.S. Army's Fort Huachuca, and has substantially less mileage (and resultantly less environmental, paleontological, and social impacts). Furthermore, Subroute 4B impacts fewer known cultural resources and has impacts that are more effectively mitigated.

We wish to emphasize that the federal government does not supersede the authority of state and local control and decision making in siting transmission lines on property not owned by the federal government. Law demands that the BLM identify the least intrusive route for this project. The BLM has failed to do so in identifying Subroute 4C2e as the current Preferred Alternative.

On behalf of my fellow Board members, I thank you for the opportunity to comment on this important project, and we look forward to continued participation throughout the NEPA process.

Sincerely,

Richard R. Searle
Chairman, Cochise County Board of Supervisors

Cc: Patrick G. Call, District 1 Supervisor
Ann English, District 2 Supervisor
Michael J. Ortega, County Administrator
James E. Vlahovich, Deputy County Administrator
Karen Riggs, Interim Community Development Director
Beverly Wilson, Deputy Planning Director
Public Lands Advisory Committee
Gretchen Kent, PAIO Chief, Ft. Huachuca
Mike Pool, Acting Director, Bureau of Land Management
Ken Salazar, Secretary, Department of the Interior
Ray Suazo, Director, Arizona Bureau of Land Management
Mickey Siegel, SunZia DEIS Contractor, Environmental Planning Group

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1588	Response to Comment
	See following page(s)

1593

NEW MEXICO
ENVIRONMENT DEPARTMENT

Office of the Secretary

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SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

DAVE MARTIN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

July 19, 2012

Adrian Garcia
301 Dinosaur Trail
Santa Fe, NM 87508

RE: Review of Letter from Bureau of Land Management Regarding the SunZia Southwest Transmission Line Project from Lincoln County, NM to Arizona (NMED File No. 3728 ER)

Dear Mr. Garcia:

Your letter regarding the above named project was received in the New Mexico Environment Department (NMED) and was sent to various Bureaus for review and comment. Comments were provided by the Surface Water Quality Bureau, Ground Water Quality Bureau and Air Quality Bureau and are as follows.

Surface Water Quality Bureau
I have reviewed the information provided by the Bureau of Land Management regarding the transmission line construction from Arizona state line to Lincoln County, New Mexico. The comments below pertain to surface water quality only.

SUMMARY OF PROPOSED ACTIVITY

SunZia Transmission, LLC, proposes to construct, operate, and maintain two 500-kilovolt (kV) transmission lines that would be located on federal, state, and private lands between central New Mexico and central Arizona. SunZia Transmission, LLC, has submitted an application for right-of-way on public land administered by the Bureau of Land Management (BLM). The transmission line route would originate at a new substation (SunZia East) in Lincoln County, New Mexico, and terminate at the Pinal Central Substation in Pinal County, Arizona. The Project would be located within Lincoln, Socorro, Sierra, Luna, Grant, Hidalgo, and/or Torrance counties in New Mexico. The BLM preferred alternative is approximately 530 miles long, and alternative routes range between 460 and 542 miles in length. The right-of-way would be typically 400 feet wide, although a right-of-way up to 1,000 feet wide would be required under certain conditions. The BLM preferred alternative attempts to maximize use of existing utility corridors and infrastructure, minimize impacts to sensitive resources, and minimize impacts at river crossings.

1593	Response to Comment
	See following page(s)

1593

POTENTIAL IMPACTS TO WATER RESOURCES

Potential impacts primarily would result from the following construction activities: upgrading existing roads or constructing new roads for access where needed, preparing structure sites, staging areas, regeneration station site, substation sites, electrode facility, and batch plant site, assembling and erecting structures, and stringing conductors (e.g., wire pulling and splicing sites). As stated in the Draft Environmental Impact Statement, "impacts to surface water could result from placement of structures, construction of access roads, or temporary work areas. Direct impacts to perennial surface water features could include sedimentation from: fugitive dust deposition or access road construction, removal of riparian vegetation, bank alteration, accidental contamination associated with spills of environmentally harmful material, damage to wetlands, or the introduction of invasive species (pg. ES-5)."

The ROW project area crosses eight 8-digit HUC watersheds in New Mexico: Rio Grande-Albuquerque (13020203), Tularosa Valley (13050003), Jornada del Muerto (13020210), Elephant Butte Reservoir (13020211), Caballo (13030101), El Paso-Las Cruces (13030102), Mimbres (13030202), and Animas Valley (15040002). The ROW intersects a number of perennial and intermittent waters including: Rio Grande, Mimbres River (not perennial at crossing location), Arroyo del Veranito, Nogal Arroyo, Torreon Arroyo, Arroyo Seco, Chupadera Arroyo, Rock Creek, Spikey Arroyo, Indian Creek, Alamosa Creek, Cuchillo Negro Creek, Palomas Creek, Cañada Honda, Salado Creek, King Arroyo, Las Animas Creek, Seco Creek, Greyback Arroyo, Greenhorn Arroyo, Percha Creek, Montoya Arroyo, Terra Blanca Creek, Oak Spring Creek, Jaralosa Creek, Creek, and Walnut Creek. In addition, the ROW project area is drained by several ephemeral surface waters which eventually drain to perennial waters (in most cases the Rio Grande). The major drainage in the area is the Rio Grande, a perennial water of the state and a Water of the U.S. under Section 404 of the federal Clean Water Act.

Sediment from erosional processes is a serious form of nonpoint source (NPS) pollution, which can be exacerbated by vegetation removal and roads. NPS pollution controls are typically established through implementation of Best Management Practices (BMPs; see references at end of letter). The proposed ROW will temporarily disturb approximately 7,000 acres and permanently disturb approximately 5,000 acres. NMED recommends maintaining some form of compatible low vegetation (e.g. grass, forbs, and low shrubs) component within the ROW to avoid excessive erosion during precipitation events. This is especially important along the stream corridors to provide a filtering mechanism to keep excess sediment and other nonpoint source pollutants out of the watercourses. It will be important that operations involving heavy equipment minimize the amount of disturbance and exposed bare ground and attempt to leave most soil anchoring roots in place. Active re-vegetation may be necessary in areas that don't re-vegetate on their own. The DEIS includes the following mitigation measures for vegetation removal: "Mitigation measures would be applied to reduce, avoid, or otherwise provide compensation for impacts to sensitive vegetation. Where vegetation is disturbed or cleared, vegetation loss would be minimized by (1) reducing the area to the extent practicable, (2) plant salvage and revegetation in areas of temporary disturbance, and (3) closure and restoration of any access roads not required for Project maintenance or access. Closure of temporary access roads and the limiting of access through gating or other means would reduce indirect impacts to vegetation caused by recreational travel, including off-road vehicle travel beyond the Project right-of-way."

1

1593	Response to Comment
1	BMPs and mitigation measures outlined in the DEIS and the Plan of Development will mitigate impacts. Various plans that will be included in the Plan of Development including, Erosion, Dust Control, and Air Quality Plan; Stormwater Pollution Prevention Plan; and Right-of-Way Preparation, Reclamation, and Monitoring Framework Plan will all contain specific direction for mitigating these potential impacts on soil and water resources. Standard and selective mitigation measures that are described in the DEIS and applicable here are listed: Standard MM 4: The alignment of new access roads or overland route would follow the designated area's landform contours where possible, provided that such alignment does not additionally impact resource values. This would minimize ground disturbance and/or reduce scarring (visual contrast). Standard MM-5: In construction areas where grading is not required, vegetation would be left in place wherever possible, and original contour would be maintained to avoid excessive root damage and allow for regrowth. All existing roads would be left in a condition equal to or better than their condition prior to the construction of the transmission lines, as determined by the appropriate land-managing agency. Standard MM-8: In construction areas (e.g., marshalling yards, structure sites, spur roads from existing access roads) where grading is required, surface restoration would be implemented as required by the landowner or BLM Authorized Officer. The method of restoration would normally consist of returning disturbed areas back to their natural contour, reseeding (where required), cross drains installed for erosion control, placing water bars in the road, and filling ditches. Standard MM-18: Roads would be built as near as possible at right angles to the streams and washes. Culverts or temporary bridges would be installed where necessary. All construction and operations activities shall be conducted in a manner that would minimize disturbance to vegetation, drainage channels, and intermittent or perennial stream banks. Selective MM-3: Overland access (i.e., drive-and-crush or cut-and-clear) would be used to the greatest extent possible in areas where no grading would be needed to access work areas. Drive-and-crush is vehicular travel to access a site without significantly modifying the landscape. Vegetation is crushed, but not cropped. Soil compacted, but no surface soil is removed. Cut-and-clear is considered as brushing off (removal) of all vegetation to improve or provide suitable access for equipment. All vegetation is removed using above-ground cutting methods that leave the root crown intact.

1593

To minimize impacts to water quality, all roads should be designed for specific types of vehicles and required vehicle speed while providing frequent drainage with outsloping where feasible, grade reversals, and frequent cross-drains such as rolling dips or turnouts. The design should also limit the alteration of natural drainage patterns by following contours and minimizing cuts, fill, and stream crossings. Ideally the number of roads in a watershed should be minimized and avoid problem areas such as active floodplains, narrow canyon bottoms, wet areas, steep slopes, and highly erodible or unstable soil. A buffer strip of undisturbed soil and vegetation between the road and streams should be provided. Stream crossings including low-water crossings, bridges, and culverts should be properly oriented, designed, inspected/monitored, and maintained. These design features will reduce maintenance costs and impacts to water quality over the long term.

Corps of Engineers 404 Permit and New Mexico 401 Water Quality Certification Issues

Because this project involves activities, including the new construction and improvement of existing roads, which may directly impact ephemeral, intermittent or perennial streams tributary to a Water of the U.S., this project may require a permit under Section 404 of the federal Clean Water Act (33 USC 1344). To determine if this project will require a 404 permit, contact the U.S. Army Corps of Engineers at: http://www.spa.usace.army.mil/reg/. The 404 permit is issued by the U.S. Army Corps of Engineers and also requires a state water quality certification under Section 401 of the Clean Water Act. The 404 permit is not valid without the 401 certification. The 401 certification issued by the state of New Mexico is to ensure the project will not adversely impact the state of New Mexico's water quality standards (*State of New Mexico Standards for Interstate and Inirastate Surface Waters, New Mexico Water Quality Control Commission, 20.6.4 NMAC, As amended April 18, 2011).* Information concerning the New Mexico 401 Water Quality Certification can be obtained by contacting the New Mexico Environment Department at (575) 476-3017 or (575) 827-0187.

USEPA Construction General Permit Issues

The U.S. Environmental Protection Agency (USEPA) requires National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) coverage for storm water discharges from construction projects (common plans of development) that will result in the disturbance (or re-disturbance) of one or more acres, including expansions, of total land area. Because this project exceeds one acre (including staging areas, etc.), it may require appropriate NPDES permit coverage prior to beginning construction.

Among other things, this permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMPs) be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants (primarily sediment, oil & grease and construction materials from construction sites) in storm water runoff from entering waters of the U.S. This permit also requires that permanent stabilization measures (revegetation, paving, etc.), and permanent storm water management measures (storm water detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering these waters. In addition, permittees must ensure that there is no increase in sediment yield and flow velocity from the construction site (both during and after construction) compared to pre-construction, undisturbed conditions (see Subpart 10.D.1.b)

1593	Response to Comment
2	Access roads would be designed to limit impacts to soil and water resources. BMPs and standard mitigation measures would include holding to the natural contour of the landscape, minimizing cuts, and crossing streams and washes at right angles. Standard MM-8: In construction areas (e.g., marshalling yards, structure sites, spur roads from existing access roads) where grading is required, surface restoration would be implemented as required by the landowner or BLM Authorized Officer. The method of restoration would normally consist of returning disturbed areas back to their natural contour, reseeding (where required), cross drains installed for erosion control, placing water bars in the road, and filling ditches. Standard MM-18: Roads would be built as near as possible at right angles to the streams and washes. Culverts or temporary bridges would be installed where necessary. All construction and operations activities shall be conducted in a manner that would minimize disturbance to vegetation, drainage channels, and intermittent or perennial stream banks.
3	The DEIS includes provisions for the completion of the USACE 404 permitting process (1-20) and requirements for compliance with 20.6 NMAC (1-21). Conformation with these requirements is essential for the Project to comply with its regulatory framework.
4	Compliance with the EPAs National Pollutant Discharge System is a part of the Project regulatory framework (1-19, 1-21). This will include the implementation of a Stormwater Pollution Prevention Plan, to be included in the Plan of Development.

1593

You should also be aware that EPA requires that all "operators" obtain NPDES permit coverage for construction projects. Generally, this means that at least two parties will require permit coverage. The owner/developer of this construction project who has operational control over project specifications, the general contractor who has day-to-day operational control of those activities at the site, which are necessary to ensure compliance with the storm water pollution plan and other permit conditions, and possibly other "operators" will require appropriate NPDES permit coverage for this project.

The CGP was re-issued effective June 30, 2008. The CGP, Notice of Intent (NOI), Fact Sheet, and Federal Register notice can be downloaded at:
http://cfpub.epa.gov/npdes/stormwater/cgp.cfm

With proper best management practices implemented, impacts of this project to surface waters of the State can be minimized.

Ground Water Quality Bureau
Ground Water Quality Bureau staff reviewed the above-referenced letter as requested, focusing specifically on the potential effect to ground water resources in the area of the proposed projects.

The letter announces the release of an Environmental Impact Statement (EIS) for the SunZia Southwest Transmission Line Project to be constructed from a new substation in Lincoln County, NM to the Pinal Substation in Pinal County, AZ. The preferred alternative will extend approximately 530 miles along parts of US 380, I-25 and I-10 in New Mexico. In addition to the substation in Lincoln County, the project will include two midpoint substations in Luna and Hidalgo Counties.

5 The completed projects are not expected to have any adverse impacts on ground water quality in the area of the project. However, implementation of the project will involve the use of heavy equipment, thereby leading to a possibility of contaminant releases (e.g., fuel, hydraulic fluid, etc.) associated with equipment malfunctions. The GWQB advises all parties involved in the project to be aware of notification requirements for accidental discharges contained in 20.6.2.1203 NMAC. Compliance with the notification and response requirements will further ensure the protection of ground water quality in the vicinity of the project.

Air Quality Bureau

6 This letter comprises the Air Quality Bureau's (AQB) comments on the Draft Environmental Impact Statement (EIS) for the SunZia Southwest Transmission Line Project, Lincoln County, New Mexico to Pinal County, AZ. As proposed, the transmission line will traverse through Lincoln, Socorro, Sierra, Luna, Grant, Hidalgo, and/or Torrance Counties in New Mexico. The AQB concurs with the statements in the draft EIS regarding air quality impacts and use of best management practices (BMPs). The following comments emphasize the importance of using BMPs to minimize potential impacts and address the use of properly permitted and licensed contractors.

7 The New Mexico counties which the project travels trough for the proposed construction, are currently in attainment for all of the New Mexico and National Ambient Air Quality Standards. However, the AQB has recorded exceedances of the standard for particulate matter (PM_{10}) in Luna County. In lieu of a nonattainment designation, a Natural Events Action Plan (NEAP) for

1593	Response to Comment
5	Compliance with 20.6 NMAC is part of the Project regulatory framework. The Stormwater Pollution Prevention Plan, to be included in the POD, will specifically address notification and response requirements for containment releases and accidental discharges.
6	Comment noted – no action required
7	An Erosion, Dust Control, and Air Quality Plan will be included in the Final Plan of Development. This Plan includes specific requirements and goals for achieving regulatory compliance and resource protection.

1593

Luna County has been prepared and approved by the U.S. Environmental Protection Agency (EPA). As part of the NEAP, Luna County adopted ordinance 75 which contains requirements for fugitive dust control. In accordance with this ordinance and as outlined in the draft EIS, appropriate dust control and reclamation measures (BMPs) must be implemented for any soil disturbing activities.

8 To clarify a statement on page 3-11 of the draft EIS, from 2009 to 2011 EPA undertook a reevaluation of the 2008 ozone (O_3) NAAQS, effectively delaying nonattainment designations until 2012. During this time period, monitoring data showed improvements in O_3 air quality and attainment of the standard. As a result, the 2009 Sunland Park O_3 nonattainment recommendation made by the governor of New Mexico was rescinded.

9 All asphalt, concrete, quarrying, crushing and screening facilities contracted in conjunction with the proposed project must have current and proper air quality permits. Potential emissions from any diesel generator sets should be calculated assuming continuous operation to determine whether a construction permit is required. For more information on air quality permitting and modeling requirements, please refer to 20.2.72 NMAC.

6 This project will temporarily impact air quality as a result of fugitive dust and equipment exhaust emissions generated during construction and will impact air quality in the area. However, with the appropriate dust control measures in place, the increased levels should be minimal. The project, as proposed, is not anticipated to result in nonattainment of the New Mexico or National Ambient Air Quality Standards or contribute negatively to air quality on a long-term basis.

I hope this information is helpful to you.

Sincerely,

Julie Roybal
Environmental Impact Review Coordinator
NMED File #3728 ER

1593	Response to Comment
8	Removed governor's order discussion from text in Section 3.2 of the FEIS.
9	An Erosion, Dust Control, and Air Quality Plan will be included in the Final POD. This Plan includes specific requirements and goals for air quality permitting and modeling.

1595

SAN CARLOS APACHE TRIBE
San Carlos Avenue
P.O. Box 0
San Carlos, Arizona 85550
(928) 475-2361 ✧ Fax (928) 475-2296

Terry Rambler
Tribal Chairman

Dr. John Bush
Tribal Vice-Chairman

August 22, 2012

Sent via Electronic Mail to:
Bureau of Land Management
C/O Adrian Garcia, BLM Project Manager,
NMSunZiaProject@blm.gov

Sent via U.S. Mail to:
Bureau of Land Management
SunZia Transmission Line Project
P.O. Box 27115
Santa Fe, NM 87502-0115

Re: San Carlos Apache Tribe's First Comment Letter on the SunZia Draft EIS issued on May 25, 2012

Dear Mr. Garcia:

The Bureau of Land Management ("BLM") has released the Draft Environmental Impact Statement ("DEIS") for the SunZia Southwest Transmission Project ("SunZia", "SunZia Project" or the "Project") for public review and comment. *See* U.S. Environmental Protection Agency's Notice of Availability of the DEIS for the SunZia Project, 77 Fed.Reg. 31355 (May 25, 2012).

The San Carlos Apache Tribe ("Tribe") hereby submits comments and information concerning the BLM's SunZia DEIS. The SunZia DEIS has been reviewed by the Tribal Council, the Natural Resources Committee, the Interdisciplinary Team, Tribal Department Supervisors and attorneys. Pursuant to the National Environmental Policy Act of 1969 ("NEPA"), the Tribe takes this opportunity to comment upon the SunZia DEIS.

1 The Tribe thanks the BLM for the initial consultations which occurred with the Tribe's representatives and department managers and commends the BLM for these initial efforts. Regretfully, these initial consultation efforts were not followed up. Accordingly, the Tribe strenuously opposes the BLM's selection of Preferred Alternative Subroute 4C2c. At this time the Tribe requests that the BLM consider and select Subroute 4C3 – Tucson as resulting in significantly less environmental and cultural impacts which are significant to the Tribe.

1595	Response to Comment
1	The BLM-preferred alternative is Subroute 4C2c, which would cross the San Pedro River at the same location as Subroute 4C3, within an existing transmission line corridor. A portion of Subroute 4C2c would be located parallel to the San Pedro River, although several miles west of the river. Construction of the Project along this route would avoid the majority of known cultural resource sites located along the San Pedro River, and avoid impacts to cultural resources within the Tucson area for Subroute 4C3. A hiatus in consultation with San Carlos (and other consulting parties) was the result of the information gathering process necessary for NEPA analysis.

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Apache Homelands

The SunZia DEIS analyzes over 120 alternative routes. Most of the proposed alternative routes in both Arizona and New Mexico traverse traditional Apache aboriginal lands. More particularly, several of the alternative routes in Arizona pass through the homelands of the Western Apache.

The Western Apache homeland encompassed the greater portion of eastern Arizona from the San Francisco Peaks area in northern Arizona to south of the international border with Mexico. Consequently, the alternative routes in eastern Arizona all have the potential of impacting culturally sensitive and sacred areas of significance and importance to the Tribe and the Tribe's members.

2 The alternative routes which parallel the San Pedro, Sulphur Springs and San Simon Valleys cross through the heartland of the Western Apache homeland. Consequently, the Tribe, at this time, emphatically opposes these routes. The primary reason, though not the sole reason, for the Tribe's opposition to these alternative routes was the discontinuation of meaningful consultation with the Tribe's representatives and department managers. The Tribe's representatives and department managers thought it important for BLM personnel to follow through with assurances to perform a walk-through/drive-through of the proposed alternative routes through these valleys. This breakdown in the consultation process informs are opposition to any alternative routes through these valleys which are at the heart of the Apache homeland.

Apache Cultural Resources

The Tribe understands that further consultation and cooperation will occur as the SunZia Project progresses. Nevertheless, the Tribe desires to express its concern at this stage of the NEPA process regarding what appears to be an incomplete and potentially muddled evaluation process of cultural resources in general and Apache cultural resources in particular.

1. The Cultural Consultation Process.

The SunZia DEIS executive summary states in part:

> Consultation with appropriate land management agencies, tribal governments, and State Historic Preservation Offices is ongoing and will result in a Programmatic Agreement, which establishes a project-specific procedure for complying with the National Historic Preservation Act, including procedures to follow during the execution of the Project.

1595	Response to Comment
2	BLM continues to consult with San Carlos and other tribes and welcomes additional consultation and information. A driving tour of portions of the preferred route has been offered, but has not been successfully scheduled. The tribe was notified of the availability of the DEIS by letter dated 5/23/12 and transmitted in June 2012. Discussions were held in a face-to face meeting with the cultural staff on October 18, 2012.

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DEIS § ES.4.7 at ES-8. However, as previously noted, pledges of further consultation with the Tribe's representatives and managers regarding the alternative routes never occurred. Even discussions of the location or exchange of maps for the alternative routes through the San Pedro, Sulphur Springs and San Simon Valleys did not occur.

3 Furthermore, it is difficult, if not impossible, to evaluate the DEIS's cultural consultation process when not even an outline of the basic terms of a Historic Properties Treatment Plan and/or a Programmatic Agreement as specifically relates to the SunZia Project are not discussed or examined with any meaningful detail.

Whatever transmission route rights of way are ultimately approved by BLM, the Tribe is hopeful that meaningful consultation with Tribal personnel will occur in a timely manner.

2. Qualification of Cultural Consultants.

During the October 4, 2011 meeting with BLM personnel and the Tribe's representatives, it was recognized and acknowledged that the ability of archaeologists to accurately identify Apache sites was a matter of concern. During that meeting, it was generally recognized that archaeologists acknowledged the subtlety of Apache sites and the difficulty in proper identification of remains. It was further acknowledged that Apache sacred areas and plant gathering areas are even more difficult to identify.

The Tribe welcomed the BLM's forthrightness in recognizing the limitations which currently exist with the proper identification of important and significant Apache cultural sites and sacred areas. The BLM's sensitivity regarding these Apache concerns is appreciated.

4 It was suggested at the October 4, 2011 meeting that training in the recognition and identification of Apache cultural sites would occur before any Class III pedestrian inventories were performed. It is the fervent aspiration of the Tribe that BLM and SunZia will actively engage in training to recognize and identify Apache cultural sites and sacred areas. The Tribe hopes that the BLM's candor and sensitivity will be translated into meaningful training opportunities and engagement with Tribal personnel knowledgeable in Apache culture, traditions and religion.

Ultimately, the Tribe's concern in this arena is that cultural consultants and archeologists employed on the SunZia project be thoroughly vetted for their knowledge of Apache culture, tradition and religion and the identification of Apache cultural sites and sacred areas. The Tribe recommends close interaction with knowledgeable Tribal personnel.

3. BLM's Preferred Alternative Subroute 4C2c.

1595	Response to Comment
3	Several drafts of the PA have been transmitted to all consulting parties, including the San Carlos Apache. The draft PA was not sufficiently developed enough to include in the DEIS. A HPTP will not be developed until after a class II inventory is completed and eligibility determinations made. An outline of what the HPTP will contain is included in the draft PA. The draft PA can be found in Appendix M. (Comment re: not exchanging info on routes) Additional information was exchanged with the San Carlos Apache at a meeting at San Carlos on October 4, 2011.
4	The cultural resources inventories will be performed by archaeologists who are qualified to recognize and identify Apache cultural sites and sacred areas. The personnel conducting the inventories will consult with tribal personnel knowledgeable in Apache cultural, traditions and religion.

The Tribe's concerns regarding the BLM's and SunZia's sensitivity regarding Apache cultural sites, sacred areas, plant gathering areas and identification of remains is only exacerbated by the complete lack of sensitivity in the description of cultural resources in the BLM's Preferred Alternative Subroute 4C2c. The discussion of the BLM's Preferred Alternative Subroute 4C2c, as well as the discussions of Subroutes 4C1 and 4C2, fails to address the location of Camp Grant, the Camp Grant Apache Reservation and the Camp Grant Massacre site and their significance to the San Carlos Apache Tribe. *See* DEIS § 3.8.3.4 at 3-171.

The Camp Grant Massacre occurred at dawn on April 30, 1871. The Aravaipa Apaches and Pinaleño Apaches near Camp Grant were unarmed, having previously surrendered their weapons to the U.S. Army authorities at the Camp. A group of 6 Anglo-Americans, 48 Mexicans and 94 Tohono O'odham left Tucson for Camp Grant. They slaughtered between 110 and 144 Apaches, all but eight being women and children. Apache children, 27 to 30, were sold into slavery in Tucson and Mexico. The wounded and survivors fled into the surrounding countryside. Apache remains have been found throughout the area. At trial, those arrested for their participation in the Massacre were acquitted. The failure to mention these events or sites is an insult to Apache people.

The survivors and the relatives of the murder victims relocated almost immediately on the San Carlos Apache Reservation. The significance of the area covered by Subroute 4C2c and Subroutes 4C1 and 4C2 to the San Carlos Apache Tribe and people cannot be overstated.

5 My staff will be happy to provide the BLM with the historical import of this area and its cultural significance to the San Carlos Apache people. The omission of any mention of the cultural significance and history of Camp Grant and the Camp Grant Massacre in the SunZia DEIS is frankly a glaring oversight. In the Tribe's view, such a major blunder renders the entire proposed cultural consultation process in the DEIS suspect. The Tribe would encourage that this oversight be addressed by the BLM and SunZia with vigor. The Tribe will assist you in any reasonable manner possible.

4. Need for a Confidentiality Protocol.

6 As the BLM is well aware, the Tribe is particularly concerned that cultural and sacred sites and information shared by knowledgeable Tribal personnel remain confidential and private. The Tribe recommends that a protocol specifically addressing this issue be developed and implemented as a part of the SunZia Project.

Ecological and Environmental Concerns

1595	Response to Comment
5	Discussion of Camp Grant in detail can be found in the culture history section of the Class II cultural resource report. The intent of the culture history in the DEIS was to provide a brief culture history overview. BLM appreciates the sensitivity of this tragic event for the San Carlos Apache, and has added additional information to the FEIS (see Section 3.8.2.2; p. 3-24 and Section 3.8.3.4).
6	Comment noted. The confidentiality protocol outlined in the Programmatic Agreement will be implemented.

The BLM's Preferred Alternative, Subroute 4C2c, unnecessarily parallels the San Pedro River, cutting across perennial feeder streams and creating an increased likelihood of negative impacts to what is identified as a unique watershed and riparian environment. Subroute 4C2c will result in negative impacts on water resources and the riparian habitat in the lower San Pedro River, and increase the risk of erosion and habitat degradation.

A route through the San Pedro River Valley would (i) cause habitat fragmentation in a relatively undisturbed environment, (ii) would impact unique wildlife characteristics and habitat, including traversing a number of wildlife corridors, (iii) would lead to the permanent loss of vegetation while allowing and facilitating noxious weeds and invasive plant species, and (iv) would traverse a number of important conservation areas. 7

The BLM's Preferred Alternative Subroute 4C2c negatively impacts the San Carlos Apache Reservation. Subroute 4C2c will degrade Southwester Willow Flycatcher habitat. Reservations are often viewed as refuges with large areas of undeveloped land and riparian habitat capable of supporting a variety of threatened and endangered species. With off-reservation development, such as that proposed along Subroute 4C2c, the burden of species preservation increasingly falls upon Tribes. With less habitat available for the Southwestern Willow Flycatcher on off-reservation lands, federal agencies will look and are looking to the San Carlos Reservation as future habitat necessary for species recovery. Any designation of critical habitat on San Carlos would undermine the Tribe's sovereignty and impact the Tribe's ability to develop its own lands for the benefit of its own people.

Undoubtedly, Subroute 4C2c would impact Fish and Wildlife Service's Lower San Pedro River Collaborative Management Initiative. No mention of the Lower San Pedro River Collaborative Management Initiative or the route's impacts on the Initiative's goals was found in the SunZia DEIS. This oversight should be addressed in considering the BLM's Preferred Alternative Subroute 4C2c.

The Tribe is also concerned that SunZia employ all practical measures to reduce bird-power line collisions. The Eagle, other migratory birds and raptors are culturally significant to the Apache people. The Tribe encourages that all reasonable efforts will be employed to minimize bird-power line collisions. 8

Government-to-Government Consultations

The Tribe looks forward to further consultations with BLM regarding the SunZia Project. The Tribe will cooperate in further consultations. The Tribe requests that further government-to-government consultations be meaningful and not regarded as simply an item to be marked on a check list. Follow up assurances are important to the Tribe.

1595	Response to Comment
7	Subroute 4C2c and others in the San Pedro River Valley would cross areas without existing access. The DEIS acknowledges that disturbance to wildlife could occur as a result of any increase in recreational OHV use of new access roads. Selective mitigation measure 6 provides for the closure of roads, at the discretion of the landowner. This measure would be applied to areas identified in the final POD. Maintenance activities may also cause temporary, short-term disturbance to wildlife. However, the presence of a transmission line does not appear to be perceived as a barrier to wildlife present in the Project area. Fragmentation is anticipated to result primarily from the degree of new ground disturbance and the level of traffic on access roads. Noxious weeds and other invasive plants would be monitored and treated as described in the Noxious Weed Management Plan, Appendix B2 of the POD. Many conservation areas are described in the DEIS, and additional conservation areas are described in the FEIS as updates to the inventory. The BLM preferred alternative crossing location on the San Pedro River was selected as it is adjacent to an existing transmission corridor, in a reach of the river without perennial flow or suitable nesting habitat for the Southwestern Willow Flycatcher. Additionally, terrain on each side of the river at this location facilitates spanning the entire floodplain at an elevation that would substantially reduce or eliminate the need for vegetation management within the existing mesquite bosque. Riparian habitat in the Southwest is dynamic. However, riparian woodland recovery at this location would depend on increased base flows in the San Pedro River, either through increased precipitation or reductions in withdrawals by upstream water users in Cochise County. The Proposed Lower San Pedro River Collaborative Conservation Initiative includes a 2-mile buffer on either side of the San Pedro River, from The Narrows gauging station downstream to the Gila River. The BLM preferred alternative would cross the lower one-half mile of this study area, adjacent to an existing transmission corridor. This proposal is in early planning stages, and BLM is not aware that any lands crossed by the BLM preferred alternative would commit to participation in the Collaborative Conservation Initiative or that the Project would affect such a decision. The Collaborative Conservation Initiative is discussed in the FEIS, but specific potential impacts remain speculative at this point. The Avian Protection Plan will address potential impacts and mitigation measures for Bald Eagles, Golden Eagles, and all other raptors. Measures presented in that plan will be developed in coordination with the USFWS, Arizona Game and Fish Department, and New Mexico Department of Game and Fish.
8	Mitigation measures to reduce the potential for bird collisions with transmission lines, such as special structural design and bird diverters, has been considered and will be implemented in accordance with the conditions of the right-of-way grant and Plan of Development.

The Tribe recommends that it would be opportune for the BLM and the Tribe to develop protocols for both formal and informal government-to-government consultation. Not only could the development of protocols serve to enhance consultations on the SunZia Project, but such protocols could serve as models for government-to-government consultations for future BLM projects which impact the Tribe. 9

Tribal personnel will continue to work with the BLM on all advisable consultations on the SunZia Project including Section 106 consultations under the National Historic Preservation Act ("NHPA"). The Tribe considers consultation under Section 106 of NHPA to be in its beginning stages, and looks forward to more meaningful interactions to occur directly with BLM via face-to-face meetings, as well as field visits.

Conclusion

The San Carlos Apache Tribe supports the development of renewable energy. The Tribe looks forward to working with BLM in its efforts pertaining to the SunZia Project. However, the Tribe objects to BLM's Preferred Alternative Subroute 4C2e as having quantitatively and qualitatively greater negative impacts then benefits. The Tribe believes that Subroute 4C3 – Tucson creates fewer negative impacts to cultural resources and the environment.

The ability of the Tribe to work in partnership with the BLM is important to the Tribe. The Tribe hopes to improve this partnership with the BLM and encourages the development of consultation protocols between the Tribe and BLM.

Thank you for the opportunity to submit this comment. If I or the Tribe can be of further assistance or responsive to any questions regarding this comment, please feel free to contact my office.

Sincerely,

Terry Rambler
Chairman

Cc: John Bush, Vice- Chairman
Tribal Council Members
Wendler Nosie, Acting Director, RWD
April Howard, Biologist, RWD
Dee Randall, Tribal Forester, Forestry
Vern Grant, HP&AD
Scott Cooke, BLM
Tom Wray, SunZia

1595	Response to Comment
9	The BLM agrees that such protocols would be very helpful for both the BLM and the tribes in facilitating tribal consultation. However, this is beyond the scope of a single project such as SunZia. BLM is still committed to arranging such a field visit whenever it is convenient and practical for the San Carlos Apache.

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August 22, 2012

Adrian Garcia, Project Manager
Bureau of Land Management
SunZia Southwest Transmission Line Project
P.O Box 27115
Santa Fe, NM 87502-0115
Submitted via electronic mail to NMSunZiaProject@blm.gov

Re: Comments on the Draft Environmental Impact Statement and Resource Management Plan Amendments for the SunZia Southwest Transmission Project

Dear Mr. Garcia:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) and Resource Management Plan (RMP) Amendments for the SunZia Southwest Transmission Project. Please accept these comments on behalf of the Sierra Club's Grand Canyon Chapter and our 12,000 members in Arizona and the Center for Biological Diversity and its members.

The Sierra Club's mission is "to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments." Our members have a significant interest in the proposed SunZia Project and its impacts on natural resources. Many of our members enjoy watching wildlife, hiking, backpacking, and other outdoor and educational activities on the lands affected by this proposed project.

The Sierra Club is committed to helping reduce greenhouse gas emissions and limiting global climate change/disruption. Transforming the nation's electricity sources from polluting fossil fuels to clean renewable energy and reducing energy use through efficiency and conservation are all essential to meeting our carbon reduction goals. We are working to rapidly increase our nation's energy efficiency and use of renewable energy resources by advocating for improved appliance and building efficiency and standards to promote them, as well as a rapid ramp-up of distributed generation (mainly rooftop solar), community scale, and large-scale renewable energy, including solar, wind, and geothermal generating plants. We believe all of these will be necessary to meet our greenhouse gas reductions goal. In the short term, some proposals for large-scale renewable and associated transmission lines will be needed. We seek to minimize any impacts of that proposed transmission on wildlife, air and water quality, and other important environmental values and believe it is incumbent upon the Bureau of Land Management (BLM) to strive for this as well.

The Center for Biological Diversity is a national non-profit conservation organization headquartered in Tucson, Arizona, with more than 375,000 members and supporters, more than 10,000 of whom reside in Arizona and New Mexico. The Center is dedicated to the protection of threatened and endangered species

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and their habitats. Our members have a keen interest in the SunZia project and its impacts on the species and places we work to protect.

The BLM is required to consider existing RMPs when deciding whether or not to grant a right-of-way (43 CFR Part 1610.0-5(b)). Several of the alternatives and/or aspects of them are not in conference with the RMPs for the area. The BLM had determined that transmission lines such as the proposed SunZia Southwest Transmission Project were not suitable on various lands involved in this proposal, so no transmission right-of-way corridors were included in the RMPs for these areas. The Safford RMP includes several avoidance areas affected by the proposed project, including Swamp Springs and Hot Springs Areas of Critical Environmental Concern within the Muleshoe Ranch Cooperative Management Area (CMA). As stated in Section 2.6 of the DEIS, "the construction and operation of the proposed SunZia transmission line alternatives would not conform to the RMP due to either one of the following conditions: the right-of-way would cross an area designated in the RMP as right-of-way avoidance, or the proposed Project would not comply with VRM objectives" (pg. 2-104). Transmission rights-of-way were purposefully excluded from these areas because of impacts to valuable natural resources. The DEIS discusses some of the impacts this project would have on the resources and values in these lands, many of which would be long-term and/or irreparable. Because of these effects and because such projects were previously determined to be inappropriate for these lands, the BLM's preferred alternative should be the No Action alternative, and this project should not move forward.

2 If one of the action alternatives is selected, the BLM must maximize the percentage of the route that occurs along previously disturbed areas, including paralleling existing transmission lines and roads. As stated in Section ES.3.4 (pg. ES-4), only 56 percent of the BLM's Preferred Alternative would parallel existing or designated utility corridors. This means that a significant portion of the route would result in new development on public lands and the associated impacts to resources. BLM must avoid the Lower San Pedro River Valley and the Aravaipa Watershed, at a minimum.

While there are issues with the proposed SunZia Southwest Transmission Project through New Mexico, most of our comments focus on the Arizona portion. We also support and incorporate by reference the comments submitted by Defenders of Wildlife, Cascabel Working Group, Sky Island Alliance, Tucson Audubon Society, and Friends of the Aravaipa Region.

I. PURPOSE AND NEED

As environmental advocates, we seek to ensure that the need for new transmission and related facilities is not eclipsed by irreparable harm to unique and important ecosystems. We also want to confirm that new transmission will fulfill its primary objective of carrying renewable energy instead of becoming a major conduit for fossil fuel power. To this end, BLM has not adequately justified the purpose and need for the SunZia Transmission Project.

3 **a. BLM has not supported its assertion that constructing the SunZia line will "encourage the development of additional renewable energy."**

The Federal Energy Regulatory Commission (FERC)'s open access laws prohibit limiting a transmission system to any particular type of generation.[1] Approximately 50 percent of SunZia's capacity will be reserved for qualified anchor tenants, and the remaining 50 percent will be auctioned

[1] FERC Order No. 888. Available online at http://www.ferc.gov/legal/maj-ord-reg/land-docs/rm95-8-00w.txt.

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1	The BLM Preferred alternative would not be located within the Muleshoe Ranch CMA or any other portion of the Safford RMP avoidance areas, and therefore a plan amendment would not be required for this alternative.
2	The statement in Section ES 3.4 of the DEIS refers to BLM's objectives for selection of a preferred alternative. It is acknowledged that it is not possible to fully achieve each of these objectives for any action alternative. The preferred route selection however, balances opportunities to utilize existing utility corridors while also minimizing resource impacts.
3	As stated in the DEIS (p. 1-7), "Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services..." and reiterated on p 4-274 of the DEIS, "As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service." Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, "it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation" (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity. As stated in the DEIS (p. 1-9), "Pursuant to FERC Order 888, it is noted that the locations of individual proposed projects or transmission line interconnections cannot be identified to third parties by transmission owners." Although the specific location of the proposed projects cannot be identified, DEIS Table 1-2 provided an illustration of generation interconnection requests, including size and fuel, that were identified through transmission interconnection queues of load serving utilities within SunZia's path and represent projects located in counties which could reasonably interconnect with the existing system or SunZia. The purpose of this illustration was to provide an example of need for transmission service within the study area. Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines. The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation.

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off through an open season process.[2] With this system, established electricity generators will be heavily advantaged.

While the Southwestern Power Group (SWPG) has repeatedly characterized the SunZia project as intended to deliver primarily renewable energy, various factors conflict this point.

Although the DEIS frequently mentions them, major wind projects in New Mexico have stalled. In the years that it would take for these projects to come online, more accessible sources of electricity generation are likely to step in and utilize SunZia first. The DEIS leaves a strong impression that the SunZia proposal will also encourage the development of additional renewable sources. Such an impression is misleading. Any "encouragement" would apply equally to renewables, coal, nuclear, natural gas – to any energy source. Under federal policies, transmission lines must be neutral. Transmission operations cannot discriminate between different sources of energy.

While some of the most blatant references to renewable energy included in BLM's 2009–2010 scoping documents have been modified, inappropriate and inaccurate references remain. For example, BLM, describing the applicant's purpose, states that the "Project would assist load-serving utilities in meeting the requirements to address energy delivery obligations to meet state renewable portfolio standards (RPS)."

Additionally, in citing the Renewable Energy Order, which makes the production and delivery of renewable energy a top priority, BLM reinforces the erroneous impression that the SunZia project would in any way be dedicated to renewable energy. Ignored entirely is the possibility that energy generated from renewable sources could be as easily delivered through more localized transmission systems or distributed energy programs. A 500-mile, multi-state transmission line would not necessarily be the best (or the only good) option for delivering energy safely and effectively.

The proposed routes for SunZia, including BLM's Preferred Alternative, closely parallel existing natural gas pipelines.[3] The Bowie Power Station, a 1000-Megawatt (MW) natural gas plant already planned and permitted for Cochise County, Arizona, is located along the proposed SunZia route.[4] SWPG is the developer for both SunZia and Bowie.

In fact, the SunZia project's initial purpose was to provide transmission capacity for the Bowie power plant.[5] The proposed Willow substation, a central component of SunZia, is also a permitted part of the Bowie plant.[6] When SunZia was recast as a renewable energy project in 2008, references to Bowie disappeared, although the siting and interconnection plans remain closely linked.

SWPG has stated that SunZia is no longer needed for the Bowie plant, but data from Tucson Electric Power (TEP) indicates that, as of 2007, the two existing transmission lines permitted for Bowie were

[2] FERC Order on Sunzia's Petition, Docket No. EL11-24-000, May 20, 2011. Available online at http://www.sunzia.net/documents_pdfs/ferc_order_on_sz_petition_5_20_2011.pdf.
[3] U.S. Energy Information Administration. Natural Gas Pipelines in the Western Region. Available online at http://205.254.135.7/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/western.html.
[4] See Bowie Power Station website at http://www.bowiepower.com/index.htm.
[5] Meader, N. 2011. SWAT Background on the Origin of the SunZia Project and Constraints on the Project's Capacity to Carry Renewable Energy. Cascabel Working Group. Available online at http://cascabelworkinggroup.org/downloads/SWAT-SunZia_Early_History-07-17-11.pdf.
[6] *Id.*

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already at capacity.[7] Therefore, the Bowie plant cannot be fully utilized unless TEP substantially limits it own power transmission. The most financially prudent solution would be to build more transmission capacity – which SunZia would readily provide.

In addition to the vague separation from the Bowie natural gas plant, BLM is touting SunZia as a "primarily renewable" project without supplying a critical analysis of New Mexico's potential for wind generation. Wind-generated electricity is variable, undergoing daily and seasonal fluctuations and currently requires some fossil fuel generation to stabilize power delivery. The BLM's statement of purpose does not mention this, nor does it specify exactly how much non-renewable energy would be used to offset the fluctuations.

The BLM has not guaranteed that any of SunZia's transmission capacity would be reserved for future renewable sources, nor have they demonstrated that SWPG would not simply use the SunZia line for Bowie and other fossil fuel projects, as was originally intended. In addition, BLM has not provided data to illustrate the technical and economic feasibility of using SunZia to carry large quantities of New Mexico wind power.

These omissions are incredibly concerning. Because BLM has provided no evidence to the contrary, we are troubled by the possibility that SWPG is deliberately misrepresenting SunZia in order to expedite construction. If SunZia will be technically or financially unable to deliver on its promise of "encouraging the development of renewable energy," the public deserves to know, the project needs to be re-characterized, and a revised DEIS with the appropriate information should be issued.

In view of public comments received on BLM's scoping documents, which consistently demonstrate a widespread [mistaken] belief that the SunZia transmission lines are necessary to support renewable energy, a clear and unambiguous correction is necessary to set the record straight.

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b. BLM has not confirmed California's willingness to purchase renewable energy.

If the purpose of the SunZia project is to transmit wind power from New Mexico to meet demand in California, BLM first must confirm California's plan to purchase additional out-of-state power to satisfy its Renewable Portfolio Standard (RPS).

While California's RPS mandates that 33 percent of its electricity generation must come from renewable energy by 2020, the allowed contribution of out-of-state sources is limited.[8] By 2017, California utilities must procure at least 75 percent of their renewable energy from California sources, leaving only 25 percent available to out-of-state sources.[9] Unbundled renewable energy credits are further restricted to 10 percent.[10]

Reflecting these limitations, California has expressed a strong intent to focus on developing in-state resources rather than relying on imports from the western grid. In a 2011 letter to the Western Energy Coordinating Council (WECC), Governor Jerry Brown's office indicated that California has

[7] Meader, N. Transmission Needs for the Bowie, Arizona, Power Plant. 2010. Cascabel Working Group. Available online at http://cascabelworkinggroup.org/Rjobs11.html.
[8] Cal. Pub. Util. Code §399.15(b)
[9] Cal. Pub. Util. Code §399.16
[10] *Id.*

4 sufficient in-state renewable resources to meet all of its electricity needs.[11] Under these circumstances, California is unlikely to import large quantities of renewable power from other states.

Without a firm purchasing commitment from California, constructing and operating such an extensive and costly transmission system is a poor and shortsighted investment.

5 **c. California does not have the infrastructure necessary to connect with the SunZia line.**

The proposed SunZia line terminates in Eloy, Arizona, meaning that additional transmission is needed to connect with California markets. Currently, California's transmission infrastructure is woefully inadequate to meet the state's desire for rapid renewable energy development.

The California Public Utilities Commission (CPUC) has estimated that 11 new transmission lines are needed in California in order to meet their renewable energy goals.[12] Three of these lines are currently underway, but CPUC predicts that even if implementation of all the other lines began today, it would take another 14 years to achieve California's 33 percent RPS.[13]

The BLM states that new transmission projects are needed to "enhance the capability of the national grid to deliver electricity." Without additional transmission lines to allow interconnection with California – which are likely to be delayed by more than a decade - the SunZia project does not meet its stated objective.

6 **d. The SunZia line is redundant with other transmission projects proposed by BLM.**

The BLM is also involved with two other interstate transmission projects, Southline and Centennial West. Both the Southline Transmission Project and Centennial West Clean Line project are in the scoping phase but have extremely similar objectives to SunZia – bringing New Mexico wind energy across southern Arizona to the California market.[14]

Building all three lines is redundant and makes each one less economically viable as a result of increased competition for power generation, as well as competition for California's limited desire and purchasing power.

7 **e. Multiple Use Mandate**

The BLM misrepresents the Federal Land Policy and Management Act (FLPMA) in asserting that the need for SunZia's proposed transmission line "arises from the FLPMA, which establishes a multiple use mandate for management of federal lands, including energy generation and transmission facilities . . ." (emphasis added). The FLMPA (section 202(c)), however, calls for a qualified requirement to "use and observe the principles of multiple use and sustained yield set forth in this and other applicable law." Moreover, Section 202(c) enumerates nine specific requirements, not only the so-

[11] Letter from Governor Brown's office to the Western Electricity Coordinating Council. August 3, 2011. Available online at http://www.wecc.biz/committees/BOD/TEPPC/20110809/Lists/Minutes/1/Letter%20to%20TEPPC%20from%20California.pdf.
[12] California Public Utilities Commission. June 2009. 33% Renewables Portfolio Standard: Implementation Analysis Preliminary Results. Available online at http://www.cpuc.ca.gov/NR/rdonlyres/1865C207-FEB5-43CF-99EB-A212B78467F6/0/33PercentRPSImplementationAnalysisInterimReport.pdf.
[13] *Id.*
[14] See Southline Transmission Project webpage at http://southlinetransmissionproject.com and Centennial West Clean Line webpage at http://www.centennialwestcleanline.com/site/home.

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4	The deliverability, destination, and cost-competitiveness of the electricity carried on the proposed SunZia transmission system are subject to future negotiations. Subscription of SunZia's available transmission capacity is dependent on the customers of the transmission line (i.e., generators planning to sell energy) and their associated buyers (i.e., utilities, cooperatives, other energy consumers); therefore, it is unknown and speculative to predict which energy markets SunZia's future (but currently unidentified) customers may serve. Further, electricity on the transmission system is in a constant state of fluctuation and is dependent on a number of factors (e.g., changes in energy demand, addition of transmission, addition of generation resources, fossil generation, project closures due to economics, age and regulations etc.). Future electrical paths for electricity transported by SunZia will be determined based on available transmission capacity and contractual arrangements in place at the time SunZia becomes operational.
5	Please, see response to Comment No. 4.
6	As stated in the Section 4.17.4.13 of the DEIS (pg. 4-319) "The High Plains Express Transmission Project and the Centennial West Clean Line Project are multistate transmission projects that could provide added potential electrical transmission paths originating in central and eastern New Mexico, respectively. The proposed Southline Transmission Project (345 kV), located between southwestern New Mexico and southeastern Arizona, could transport additional electricity generated from sources in those areas; however, the purpose and need for the Southline project is different than for the SunZia Project. The Southline project's capacity would be limited according to the plan to construct portions of the proposed transmission lines within existing rights-of-way." The cumulative impacts analysis in the DEIS (Section 4.17) accurately reflects the current status of the future transmission project proposals, as there is insufficient information available about the listed project proposals to understand their purpose and need statements, benefits, or potential environmental impacts.
7	As noted in Section 1.3 of the DEIS, all requirements in Section 202(c) of FLPMA are addressed by the BLM in consideration of right-of-way applications for generation, transmission, and distribution of electric energy. With respect to Subsection 3 of Section 202(c), areas of critical environmental concern (ACEC) have been designated in the RMPs and considered a high priority of avoidance in development of new rights-of-way. The BLM Preferred would not require rights-of-way crossing any ACEC.

7 called multiple use mandate. The BLM ignores entirely these other requirements of section 202(c), notably subsection 3, which requires that agencies give priority to the designation and protection of areas of critical environmental concern.

By singling out one subsection of FLPMA, section 202(c), and characterizing it as a "mandate," the BLM fails to fully and fairly inform the public about FLPMA's role in the SunZia project.

8 **f. Energy Policy Act of 2005 (EPAct) requirements**

In another example of BLM's linking the SunZia Project to renewable energy, BLM states the SunZia project is needed to satisfy EPAct's requirement to establish additional energy corridors.

At the present time, EPAct's authority over BLM and its decision on the SunZia project is highly problematic. In 2009, a lawsuit[15]was filed challenging agencies' decisions under EPAct, alleging that they "created a sprawling, hopscotch network of 6,000 miles of rights-of-way" without considering environmental impacts, properly analyzing alternative actions, and more. In June 2012, a settlement agreement was reached in this litigation.[16] Under this settlement, environmentally sensitive areas should be protected and proliferation of dispersed right-of-ways should be diminished.

II. PROPOSED ACTION AND ALTERNATIVES

The National Environmental Policy Act (NEPA) requires the BLM to consider and evaluate the full range of reasonable alternatives, alternatives that are "practible and feasible." As we indicated in our scoping comments[17], proposed routes through either the Lower San Pedro River Valley or the Aravaipa Canyon Watershed are completely unacceptable and should be removed from further consideration. We asked that they be removed from further consideration due to the significant environmental harms each would promote and, as such, do not consider them to be either practible or feasible. However, rather than remove these unreasonable alternatives, the BLM added yet another unacceptable alternative along the western side of the San Pedro and through the Lower San Pedro River Valley.

9 **a. No Action Alternative**

The Council on Environmental Quality (CEQ) regulations direct that the DEIS include a description of the No Action alternative (40 CFR 1502.14[d]). In its brief description of NEPA's No Action alternative requirement, BLM fails to actually set forth any analysis of the consequences – both good and bad – of not allowing the SunZia project. Instead, BLM only states that it is required to demonstrate the consequence of failure to meet the purpose and needs of the proposed action and its alternatives. The BLM reveals that it has decided without analysis that the No Action alternative constitutes failure to meet a need.

The BLM indicates that there is "potential for additional actions" if the SunZia project is denied. No specific information is provided to explain such potential. A full and accurate depiction of the status quo (without a SunZia transmission project) is essential to any analysis of the No Action alternative.

[15] See *The Wilderness Society et al. v. United States Department of Interior,et al.* Case3:09-cv-03048-JW. Document 77-1. Filed 3 July 2012.
[16] Ibid.
[17] See Sierra Club et al., June 10, 2010.

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8	Comment noted
9	As stated in Section 2.3.1 of the DEIS "This (No Action) alternative does not consider the potential for additional actions that could occur contingent on the denial of the proposed action or alternatives." It would be speculative to determine the consequences of any additional actions that may occur if the SunZia project is denied.

10 Such status quo should include pending additional actions, such as the proposed Southline and Centennial West transmission lines. Similarly, any evidence of transmission shortages within a state should be clearly identified, if such shortages in fact exist.

The BLM acknowledges that existing transmission service would be continued, including "proposed generation projects with existing, documented interconnection requests" (Section 2.3.1, pg. 2-10). A citation to Chapter 1, Table 1-2, is the only "analysis" of the existing interconnection requests and proposed generation projects alluded to in the no-action paragraph. Even from the sparse information set forth in Table 1-2, these interconnection requests are promising, suggesting that the SunZia project may not be needed and may, in fact, be superfluous. But why was there no BLM description or analysis of these requests?

The public cannot be expected to effectively evaluate the impacts of various options available to BLM with such a conclusory, non-substantive No Action alternative.

b. Aravaipa Canyon Watershed

Both Subroute 4A (North of Mt. Graham) and Subroute 4B (Sulphur Springs Valley) would bisect one of the largest unfragmented landscapes in Arizona, the Galiuro-Aravaipa-Santa Teresa wildland complex. Subroute 4A runs 132.9 miles from the proposed Willow-500kV Substation northwest along US Route 191 and generally tracks along the boundary of the Coronado National Forest (Pinaleño Mountains), heads west, and cuts between the Galiuro and Aravaipa Wilderness Areas. Subroute 4B runs for 133.0 miles and proceeds southwest from the proposed Willow-500 kV Substation, parallels two 345-kV transmission lines, and crosses two pipelines and US Route 191 before turning north through the Sulphur Springs Valley. It then moves west and follows the same path as Subroute 4A. This route has even more environmental impacts than Subroute 4A, but both bisect this important wilderness complex.

11 In our scoping comments, we expressed strong opposition to routes that would impact the Aravaipa Canyon watershed by cutting through it for more than 20 miles, crossing Aravaipa Creek, and fragmenting connectivity between two wilderness areas – Aravaipa Canyon Wilderness and Galiuro Wilderness. As we noted, this area is one of the largest unfragmented wildland blocks in southern Arizona. A new transmission corridor would impair wilderness characteristics and values and would likely lead to unintended and undesirable impacts to this intact wildland complex. As we expressed previously, this is unacceptable and unreasonable and should be removed from further consideration. Currently, the applicant, SunZia, is pushing for this extremely ecologically damaging siting.

12 These sub-routes pass within two miles of the Aravaipa Wilderness boundary. The intervening two miles contain roads that are recommended for closure and lands that are recommended as an "Area to be Managed for Wilderness Characteristics" in a Sky Island Alliance report.[18] This same report contains a citizens' proposal for wilderness additions to the existing Galiuro Wilderness Area managed by the Coronado National Forest, which, together with the sensitive BLM lands to the north, constitute a priority area for wildlands protection and maintenance of north-south ecological connectivity.

Aravaipa Creek supports a lush riparian community and provides important habitat for numerous species of wildlife, including various species of bats, coatimundi, leopard frogs, and mountain lions,

[18] Sky Island Alliance. 2005. Aravaipa Ecosystem Management Plan: Management Recommendations. Tucson, Arizona. Available online at http://www.skyislandalliance.org/media/aravaipa.pdf.

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10	Please see response to Comment No. 9.
11	Subroutes 4A and 4B, which would cross the Aravaipa Creek, are two of several action alternatives considered in the DEIS. Although either of these two alternative subroutes would cross the creek in the area between the wilderness areas as noted, there are existing roads within this area that have altered natural conditions and therefore the area would not exhibit the attributes of lands with wilderness characteristics. As noted in the DEIS (Section 4.12.5.3) for the assessment of LWC's for SunZia, the only LWC inventory units in Arizona that were identified was the Muleshoe Unit that would be crossed by one of SunZia's alternatives (not the Preferred Route).
12	Text has been modified in Section 3.12.4 of the FEIS as follows: Last sentence of first paragraph on page 3-266 *Citizen's Wilderness Inventory Units have been reviewed as part of the inventory of Lands with Wilderness Characteristics on BLM lands.* Subroute 4A and 4B would pass within 3.5 miles of the Aravaipa Wilderness Boundary. Please see comment response #11. The lands for which these subroutes traverse do not exhibit wilderness characteristics as identified by the BLM.

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among many others. A 17-mile stretch of Aravaipa Creek is perennial and provides some of the best native fish habitat in Arizona, supporting seven species of native fish, including the federally-listed endangered spikedace and loach minnow. Although the upper and lower portions of the creek are intermittent and ephemeral, they continue to support important riparian vegetation and provide habitat for many wildlife species. The importance of ephemeral and intermittent waters is discussed in further detail below.

According to the BLM, more than 150 species of birds have been documented in the Aravaipa Wilderness, including the peregrine falcon, common black-hawk, bald eagle, cactus ferruginous pygmy-owl, and southwestern willow flycatcher.[19] Because of this, the area is very popular for birding. Aravaipa also supports recreational opportunities for hikers, backpackers, and wildlife watchers, among others. All of these are an important component of the economy and of resource values, which are not discussed in the DEIS.

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The proposed route bisects one of only two priority cultural resource areas in the Upper Aravaipa Valley and would fragment an important connection between the Galiuro Wilderness located in the Coronado National Forest and the Aravaipa Canyon Wilderness located on BLM lands.

Construction of a large transmission line involves developing temporary construction roads as well as a permanent road under the line. This causes significant habitat fragmentation and invites off-road vehicles. Roads and motorized uses can have serious detrimental effects on habitats and wildlife.[20,21,22] These effects include direct, indirect, and cumulative impacts, ranging from mortality from collisions with vehicles, modification of animal behaviors, altered use of habitats, facilitation of the spread of exotic, invasive, and parasitic species, adverse genetic effects, and fragmentation of connected habitats.

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Further road-building, construction, and improved off-road vehicle access in this area will also contribute to erosion and sedimentation that could travel downstream through tributaries and impact threatened native fish populations and other species[23,24] in Aravaipa Canyon, over 20 of which are designated with some sort of special status.

The Nature Conservancy recently conducted a detailed cumulative effects analysis regarding the Galiuro-Aravaipa-Santa Teresa wildland complex and found that, in the Southwest, it is second only to the Grand Canyon region with regards to size and relative intactness.[25] The Nature Conservancy found that the proposed SunZia transmission project through this area

[19] Bureau of Land Management. Wildlife: Avavaipa Canyon Wilderness Area Permit System. Safford Field Office. Available online at http://www.blm.gov/az/st/en/arolrsmain/aravaipa/wildlife.html.
[20] Trombulak , S.C., and C.A. Frissell. 2000. Review of ecological effects of roads on terrestrial and aquatic communities. Conservation Biology 14: 18-30.
[21] Wisdom, M.J., A.A. Ager, H.K. Preisler, N.J. Cimon, and B.K. Johnson. 2004. Effects of off-road recreation on mule deer and elk. Transactions of the North American Wildlife and Natural Resources Conference 69: 531-550.
[22] van Riper, C. III., and R. Ockenfels. 1998. The influence of transportation corridors on the movement of pronghorn antelope over a fragmented landscape in northern Arizona. Proceedings International Conference on Wildlife Ecology and Transportation (ICOWET).
[23] Environmental Protection Agency. 1995. Erosion, Sediment and Runoff Control for Roads and Highways. EPA-840-F-95-008d.
[24] Grace, J. M. III. 2002. Sediment Movement from Forest Road Systems: Roads: a Major Contributor to Erosion and Stream Sedimentation. The Free Library. Available online at http://www.thefreelibrary.com/Sediment+movement+from+forest+road+systems%3A+Roads53A+a+major...-a095443346.
[25] Marshall, R., D. Turner, and D. Majka. 2012. Cumulative Effects Analysis for Proposed SunZia Transmission Line. The Nature Conservancy.

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13	Dispersed recreation within the Aravaipa Wilderness was considered and assessed in the Visual Resource and Wilderness, Wilderness Study Areas, and Lands with Wilderness Characteristics sections of the DEIS (Section 3.9.3.3 and Section 3.12.3.3.
14	The application of standard mitigation measures along the length of Subroute 4C2c in the San Pedro River Valley and selective mitigation measures where sensitive soils have been mapped along this alternative would mitigate impacts to soils that are susceptible to water erosion thereby limiting surface destabilization and sedimentation into the watershed. Standard mitigation measures (Table 2-10) include a number of for proper road construction methods to ensure stable surfaces both for the sake of reducing Project-related impacts to the environment and continued maintenance access to the Project area. Standard mitigation measure #4 requires siting access roads along the natural landform contour wherever possible thereby reducing both ground disturbance and vegetation removal reducing the potential for erosion of surface soils. Standard mitigation measure #5 requires that vegetation be left in place where possible which would reduce ground disturbance and maintain subsurface root structure reducing the potential for erosion beyond natural levels to occur. Standard mitigation measure #8 requires surface restoration of various Project-related work areas including restoration to original landform contours, reseeding, and installation of cross drains to control water flow within the Project area which would restore disturbed site stability and reduce the potential for erosion beyond natural levels. Standard mitigation measure #19 requires that tower sites be located at least 200 feet from any stream where practicable which would limit the potential for sedimentation. The application of selective mitigation measures (Table 2-11) where soils susceptible to water erosion have been mapped within the San Pedro River Valley would further reduce the potential for erosion beyond naturally occurring levels. These selective measures include not widening or otherwise upgrading existing access roads in areas with erosion susceptible soils, utilizing existing crossings of perennial streams, placing crossings of canyons at the maximum practicable distance, utilizing overland access (i.e., drive-and-crush or cut-and-clear) to the greatest extent possible. All of these measures would further reduce Project impacts to soils susceptible to water erosion. Furthermore, the Project Plan of Development would include erosion-control and site reclamation procedures in the Erosion Dust Control, and Air Quality Plan; Stormwater Pollution Prevention Plan Methodology; and Right-of-Way Preparation, Reclamation, and Monitoring Framework Plan.

15 . . . would split in half the second largest unfragmented landscape remaining in the southwestern U.S. and introduce habitat disturbance into an area where, for example, there are no paved roads and no roads that cross over the axis of the Galiuros from Aravaipa Valley to the San Pedro River Valley, or from Aravaipa Valley over the Santa Teresas into the Gila River Valley. With the Southwest's largest remaining intact area, the Grand Canyon, already in protected status, **it raises the question of whether mitigation measures are even possible for disturbances to the region's second largest intact landscape.**[26] (emphasis added)

c. Lower San Pedro River Valley

Subroute 4C2c (BLM Preferred Alternative), Subroute 4C1 (East of San Pedro River), and Subroute 4C2 (including 4C2a, 4C2b; West of San Pedro River) would all bisect the Lower San Pedro River Valley and have an unacceptable and unmitigable impact on this ecologically significant area.

Subroute 4C2c, the BLM Preferred Alternative, runs 161.2 miles, follows existing 345-kV transmission lines from the Willow-500 kV Substation across the San Pedro River, and cuts northward through the river valley. Subroute 4C1 (139.0 miles) proceeds southwest from the proposed Willow-500 kV Substation. The subroute proceeds west/southwest, parallel to two 345-kV transmission lines for a distance, then enters the Muleshoe Ranch CMA, runs along the southern boundary of the CMA, heads northwest and parallel to the San Pedro River, and then crosses the San Pedro four miles north of San Manuel. Subroute 4C2 runs 151.8 miles and proceeds southwest from the proposed Willow-500 kV Substation and parallels two 345-kV transmission lines for a short distance. The subroute crosses the San Pedro and turns northwest through the Lower San Pedro River Valley.

The Lower San Pedro River Valley supports one of the last major free-flowing rivers in the desert southwest and, as such, is important habitat for many species and a key migratory corridor for neo-tropical birds. It is a world-renowned birding area and an important tourist destination. The San Pedro also supports the greatest diversity of mammal species in North America,[27] including mountain lion, black bear, coatimundi, javelina, fox, coyote, badger, three skunk species, mule and white-tail deer, ringtail, raccoon, bobcat, beaver, porcupine, black-tailed prairie dog, and 24 species of bats, as well as many other smaller or lesser known mammal species. In addition, the San Pedro River Valley provides habitat for a great diversity of avifauna and is an important migratory flyway.

16 During the last 20 years, the high quality riparian habitat coupled with the unfragmented nature of the lower valley has resulted in many lands being acquired for biological mitigation purposes. Most notable is the 7B Ranch owned by Resolution Copper Company, which has been identified for conservation purposes. The Preferred Alternative will go through the ranch lands.

Recently, the Lower San Pedro River Valley has been proposed by the U.S. Fish and Wildlife Service (USFWS) for the establishment of a new National Wildlife Refuge and Collaborative Conservation Initiative.[28] This is a proposal "involving interested landowners, land managing agencies, local communities, nonprofit organizations, businesses and the public who share a vision of a healthy river system contributing to people's livelihoods and a functioning, hydrologically healthy riparian corridor that supports a diverse and rich nature flora and fauna." The BLM Preferred Alternative would

[26] Ibid
[27] Bureau of Land Management. 1989. Mammal Inventory of the San Pedro Riparian National Conservation Area, Cochise County, Arizona: Final Report. San Pedro Project Office, Safford District.
[28] U.S. Fish and Wildlife Service Lower San Pedro River Collaborative Conservation Initiative Planning Update #1. Available at http://www.fws.gov/southwest/docs/LSPRCIPlanningUpdate1.pdf.

1600	Response to Comment
15	Construction of Subroute 4A or 4B of the Project would create a novel landscape feature in the Galiuro Mountains. The DEIS (Section 4.6.3.1) acknowledges that fragmentation is a potential effect of transmission lines, including recreation and maintenance activities on access roads. However, research to date on fragmentation has not focused on transmission lines in the Southwest, and no available information indicates that the operation of a transmission line would prevent connectivity for wildlife between portions of a large habitat block. Short-term disturbance would occur during construction and maintenance.
16	A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3

negatively affect the lands involved in this proposed new wildlife refuge and would also be in close proximity to Saguaro National Park (east unit).

17 In addition to the outstanding ecological values of the San Pedro River Valley, the lower valley represents one of the most intact prehistoric, cultural landscapes in southern Arizona, if not the whole Southwest.[29] A full range of cultural sites can be found in the area, providing a record of human history that spans 2,000 years. This rich cultural landscape remains under constant threat of residential and commercial development, as well as looting and vandalism. The latter is exacerbated by increased vehicular access, as demonstrated by impacts to sites located in close proximity to the 138-kV line operated by Sulphur Springs Valley Electric Cooperative; the numerous access routes associated with this line have become a magnet for off-road vehicle travel. A transmission project of the size proposed by SunZia and its related construction and maintenance access routes will greatly increase unauthorized traffic in the area, which will also increase the risk of looting and vandalism to these prehistoric sites. This threat is not adequately discussed in the DEIS, and suitable mitigation measures are not provided.

III. CLIMATE AND AIR QUALITY

a. Climate

The DEIS asserts that *not* building this project will lead to a net increase in greenhouse gas emissions because "the No Action alternative would also not facilitate transport of power from renewable energy projects to markets," and "a larger portion of future power demand would be met with higher GHG-emitting fossil fuel power plants" (Section 4.2.3.1, pg. 4-18).

18 However, as discussed above, construction of the SunZia project does *not* guarantee construction of additional renewable energy projects, does *not* guarantee that this power would be accepted by markets, such as California, and does *not* guarantee that power demand will not be met with additional fossil fuel power plants. In fact, construction of this project may be used to facilitate construction or expansion of fossil-fuel plants, such as the Bowie plant. The information provided by the BLM in this section is misleading and inaccurate. A more thorough analysis should be completed in order to determine more-informed possible outcomes from construction of this project versus adopting the No Action alternative, including the potential for this project to actually increase greenhouse gas emissions.

b. Air Quality

19 The DEIS asserts that there would be "no significant impacts to air quality" (4.2.3.2 , pg. 4-18) resulting from construction and operation of the transmission line and concrete batch plants. There will obviously be increased dust associated with the construction activities and removal of vegetation and mitigation measures for those are needed, but a bigger issue is that it assumes again that there will not be an increase in fossil-fuel generated electricity associated with this project. We question that assumption. If this line spurs development of the Bowie Generating Station and other power plants, it will increase nitrogen oxide emissions, toxic air emissions, and other pollutants. This should be considered in the FEIS.

[29] Anyon, R., T.J. Ferguson, and C. Colwell-Chanthaphonh. 2005. Natural Setting as Cultural Landscapes: The Power of Place and Tradition. USDA Forest Service Proceedings RMRS-P-36. Pp. 273-276.

1600	Response to Comment
17	The area that includes the Safford Basin, Aravaipa Valley and lower San Pedro Valley has not been designated a cultural landscape (it is not located on NPS lands) or a national historic district. The area does contain many archaeological sites and those in the study corridor have been discussed individually. Impacts from access roads are discussed in Section 4.8 of the FEIS.
18	The Bowie Power Station was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation, and would not be constructed to interconnect with the SunZia project. The potential cumulative impacts to climate and air quality of the Bowie Power Station are discussed in Section 4.17.4.2 of the DEIS. Text in Section 4.2.3.1 of the FEIS was modified as follows: "The No Action alternative would mean that air pollutant emissions from construction equipment, Project-related traffic, earthmoving activities, construction and operation of several concrete batch plants, and leakage of GHGs from substation circuit breakers would not occur. *It is assumed that GHG-emitting power plants would continue to operate under the same conditions in the future. The development of future transmission line projects that facilitate transport of power from renewable energy projects to market could result in a net decrease of GHG emissions. Fossil-fuel plants with lower emission technologies, or other new generation technologies, may also contribute to reductions in air pollutants and GHG gasses, however the degree of change cannot be determined.*"
19	Please see response to Comment Nos. 3 and 18.

1600

IV. WATER RESOURCES

The SunZia corridor would cross some of the most important waterways in the Southwest. Our comments focus on the San Pedro River.

The San Pedro River is one of only two major rivers that flow north out of Mexico into the United States, and it is one of the last undammed rivers in the entire Southwest. The San Pedro is also globally Important Bird Area. The riparian forest and adjacent Sacaton grasslands provide critical stopover habitat for millions of migrating birds each year. The San Pedro River Valley contains one of the planet's most significant Fremont cottonwood/willow gallery forests on the planet. Because of the hemispheric significance and importance of the riparian areas, the upper San Pedro River watershed was designated as the first Riparian National Conservation Area in the United States in 1988.[30]

As noted above, the San Pedro River basin is home to at least 84 species of mammals, including the Mexican gray wolf, jaguar, black bear, coatimundi, bats, and beaver. Fourteen species of fish, including imperiled native species such as Gila chub, longfin dace, desert sucker, roundtail chub, Sonora sucker, and speckled dace, may be found here. The diverse habitats are also home to 41 species of reptiles and amphibians, including the Sonoran tiger salamander and lowland leopard frog. There are more than 100 species of breeding birds, including the imperiled yellow-billed cuckoo, and, seasonally, more than 250 species of migratory birds moving through the San Pedro River valley.

20 As noted in our scoping comments, we find it incomprehensible that BLM would select a route that poses the greatest risk to the lower San Pedro River Valley as its preferred alternative, especially when recognizing that this route poses the highest risk to water resources (pp. 4-56–4-58).

a. The Route Group 4 transmission corridors

The BLM preferred alternative route begins in the State of New Mexico and crosses into Arizona north of I-10 freeway near Lordsburg, New Mexico. The BLM-preferred alternative route heads northwest within the San Simon Valley, and then turns west to a proposed Willow-500 kV Substation site. From the Willow-500 kV Substation, BLM has identified several alternative routes in Route Group 4. All of

21 the Group 4 subroutes cross the San Pedro River and some routes cross other environmentally sensitive water resources such as Aravaipa Creek and Buehman Canyon. All of the Group 4 subroutes will have significant impacts on environmentally sensitive water resources and, for this reason, Sierra Club supports the no action alternative.

i. Subroute 4A –North of Mt. Graham

22 Subroute 4A proceeds north from the Willow Substation along east of the Pinaleño Mountains. At a point north of the Pinaleño Mountains, Subroute 4A heads west crossing the headwaters of Aravaipa Creek, an Outstanding Arizona Water, and the lower San Pedro River. Subroute 4A continues to the west and eventually reaches the Pinal Central Substation near Eloy, Arizona.

ii. Subroute 4B-Sulphur Springs Valley

[30] Makings, E. 2005. Flora of the San Pedro Riparian National Conservation Area, Cochise County, Arizona. USDA Forest Service Proceedings RMRS-P-36. , Pp. 92-99.

1600	Response to Comment
20	The water resource inventory has been revised to reflect more precise measurements of water features within the study area. As indicated in Table 4-14 of the FEIS, Subroute 4C3 would cross the greatest number of perennial and intermittent streams, wells, and sole-source aquifers, followed by the BLM Preferred Alternative 4C2c. As indicated none of the alternatives would result in moderate or high impacts to water resources after application of mitigation measures to avoid erosion and sedimentation that could pose a risk to the water resources.
21	Comment noted
22	ADEQ has designated a section of Aravaipa Creek as an Outstanding Arizona Water. The designated Outstanding section is not crossed by the Project; it begins four miles from the centerline. Engineering design and both standard and selective mitigation measures would reduce potential for accelerated erosion.

Subroute 4B proceeds west from Willow Substation along links C71, C72, and C90. It continues north to the west of the Pinaleño Mountains. Beginning at Link C173, Subroute 4B is common to Subroute 4A. For this reason, Subroute 4B also crosses the headwaters of Aravaipa Creek and the lower San Pedro River north of San Manuel, Arizona and poses the same risks to environmentally sensitive water resources. 23

iii. Subroute 4C2c – BLM Preferred Alternative

The BLM-preferred alternative, Route 4C2c, heads west from the proposed Willow 500-kV Substation site. The route crosses the Sulphur Springs Valley approximately 7 miles north of Willcox, Arizona and continues west along a 345-kV transmission line corridor, generally parallel to and north of the Interstate10 freeway. The route crosses the San Pedro River approximately 11 miles north of Benson, Arizona and approximately 0.5 mile downstream from "The Narrows." Subroute 4C2c then proceeds northwest along the west side of the San Pedro River Valley and east of the Santa Catalina Mountains. The BLM preferred alternative will cross many intermittent and ephemeral stream channels draining the eastern flanks of the Santa Catalina Mountains, including Buehman Canyon, a designated Outstanding Arizona Water. Route 4C2c exits the San Pedro River Valley approximately 5 miles north of San Manuel, Arizona. The route eventually terminates at the Pinal Central Substation eight miles north of Eloy, Arizona. 24

iv. Subroute 4C1–East of San Pedro River

Subroute 4C1 is similar to the BLM preferred alternative 4C2c at the beginning and the end of the subroute, except that 4C1 proceeds north and east of the San Pedro River(i.e., along the east side of the San Pedro River Valley and west of the Pinaleno Mountains). Subroute 4C1 also turns west and crosses the lower San Pedro River south of Subroutes 4A and 4B, and north of Subroute 4C2c. Subroute 4C1 would have essentially the same negative impacts on the environmentally sensitive San Pedro River and its tributaries draining the western flanks of the Pinaleno Mountains as the BLM preferred alternative. 25

v. Subroute 4C2–West of San Pedro River

Subroute 4C2 is similar to 4C2c, except between links C212 and C441 where 4C2 varies slightly along a more northern segment. Again, Subroute 4C2 is essentially the same as the BLM preferred alternative and it shares the same risks of environmental harm to water sensitive water resources. 26

vi. Subroute 4C3–Tucson

Subroute 4C3 is similar to 4C2c from the Willow Substation through Link C261. From the Willow Substation, Subroute 4C3 continues southwesterly along links F40a, F600, F60b, F82, F80, and F11 as it approaches the Tucson area. Here it continues northwesterly along links F112, F510, and F540 before reaching the Tortolita Substation. From there it proceeds north along links C816, C817, and C820 before turning west and reaching the Pinal Central Substation near Eloy, Arizona. While the Tucson Subroute 4C3 crosses the San Pedro River, the Tucson Subroute has the relative advantage of avoiding construction of a new utility corridor with its associated access roads through the San Pedro River 27

1600	Response to Comment
23	ADEQ has designated a section of Aravaipa Creek as an Outstanding Arizona Water. The designated Outstanding Arizona Water section is not crossed by the Project; it begins four miles from the centerline. Engineering design and both standard and selective mitigation measures would reduce potential for accelerated erosion.
24	ADEQ has designated a section of Buehman Canyon as an Outstanding Arizona Water. The designated Outstanding Arizona Water section is not crossed by the Project. The Project is located downstream from Buehman Canyon and any potential sedimentation events associated with the Project are unlikely to migrate upstream. Engineering design and both standard and selective mitigation measures would reduce potential for accelerated erosion.
25	Subroute 4C1 would have similar impacts to water resources as Subroute 4C2c. However, 4C1 would cross fewer miles of sole source aquifer (25.4 miles versus 42.0 miles) and more wells than 4C2c (28 wells versus 11).
26	Subroute 4C2 would have similar impacts to water resources as Subroute 4C2c. However, 4C2 would cross fewer miles of intermittent streams (36.1 miles versus 40.3 miles) and more wells than 4C2c (25 wells versus 11).
27	Comment noted

28 Valley. It also avoids the potential risks of environmental damage to Outstanding Arizona Waters such as Buehman Canyon or Aravaipa Creek that are posed by other Group 4 alternatives. Finally, the Tucson Subroute maximizes the use of existing utility and transportation corridors since the Tucson Subroute generally parallels Interstate 10 and passes through relatively more developed areas of southeastern Arizona.

b. The BLM Preferred Alternative route in Arizona

The DEIS indicates that the BLM preferred alternative route through the lower San Pedro Valley has 36 percent of the route sensitive to water resources, **which is the highest sensitivity of all of the alternatives considered by BLM**. This route has the greatest potential impact on environmentally sensitive water resources of all of the alternatives considered. For reasons that are not explained in the DEIS, the BLM selected the route with the greatest potential to adversely affect one of the most significant and environmentally sensitive riparian areas in the nation. It makes no sense for BLM to select an alternative route that will enable the construction of a new utility corridor through the lower San Pedro River Valley, especially when other, less damaging alternative routes are available with less potential to cause environmental harm to such an important area.

c. Impacts on the San Pedro River and tributaries

The DEIS states that impacts to surface water resources, including the San Pedro River and its tributaries, could result from the placement of structures and the construction of access roads and temporary work areas. Direct impacts to the San Pedro River and its tributaries include sedimentation from project-related disturbances, fugitive dust deposition, temporary and permanent fill associated with the construction of roads and access routes, removal of riparian vegetation, bank alteration, accidental contamination associated with spills of environmentally harmful material, damage to wetlands, and introduction of non-native species of plants and animals.

29 The BLM acknowledges that the construction of access roads would likely require crossing many intermittent and ephemeral stream channels. These crossings could require the placement of temporary or permanent fill into stream channels, as well as structures that support the crossing and protect water resources (e.g., bridge pilings, culverts, wing walls, etc.). Temporary impacts would result from temporary crossings or fill used to cross intermittent or ephemeral tributaries with little to no stream flow or on temporary access roads.

30 The BLM acknowledges that modification of stream banks could result in the removal of vegetation that could take many years to recover. Sedimentation potential would increase, depending upon the extent of disturbance and the amount of recontouring needed. Permanent impacts would result from stream channel crossings, into which structures would be placed in the streambed, potentially causing an irreversible loss of riparian vegetation on either side of the crossing. The removal of unique riparian habitat, increased sedimentation, and reduced water quality are among the primary adverse environmental effects on surface water resources that are associated with the Sunzia project.

Direct impacts to intermittent surface water features are similar to those for perennial waters, although intermittent streams typically have less associated riparian vegetation and, subsequently, are more prone to erosion. Indirect impacts include increased soil erosion due to removal of vegetation. The construction of access roads would likely require stream channel crossings. These crossings could require the placement of temporary or permanent fill into stream channels, as well as structures that support the crossing and protect water resources (e.g., bridge pilings, culverts, wing walls, etc.).

1600	Response to Comment
28	Please see response to Comment No. 20.
29	Comment noted
30	The application of BMPs/engineering design, and standard and selective mitigation measures along the length of Subroute 4C2c in the San Pedro River Valley would mitigate impacts to soil and water resources. Standard mitigation measures (Table 2-10) include a number of for proper road construction methods to ensure stable surfaces both for the sake of reducing Project-related impacts to the environment and continued maintenance access to the Project area. Standard mitigation measure #4 requires siting access roads along the natural landform contour wherever possible thereby reducing both ground disturbance and vegetation removal reducing the potential for erosion of surface soils and subsequent sedimentation. Standard mitigation measure #5 requires that vegetation be left in place where possible which would reduce ground disturbance and maintain subsurface root structure reducing the potential for erosion beyond natural levels to occur. Standard mitigation measure #8 requires surface restoration of various Project-related work areas including restoration to original landform contours, reseeding, and installation of cross drains to control water flow within the Project area which would restore disturbed site stability and reduce the potential for erosion beyond natural levels. Standard mitigation measure #19 requires that tower sites be located at least 200 feet from any stream where practicable which would limit the potential for sedimentation. The application of selective mitigation measures (Table 2-11) would further reduce the potential for Project-related impacts to water resources. These selective measures include not widening or otherwise upgrading existing access roads in areas with erosion susceptible soils, utilizing existing crossings of perennial streams, placing crossings of canyons at the maximum practicable distance, utilizing overland access (i.e., drive-and-crush or cut-and-clear) to the greatest extent possible. All of these measures would further reduce Project impacts to soils susceptible to water erosion. Furthermore, the Project Plan of Development would include erosion-control and site reclamation procedures in the Erosion Dust Control, and Air Quality Plan; Stormwater Pollution Prevention Plan Methodology; and Right-of-Way Preparation, Reclamation, and Monitoring Framework Plan.

30 Temporary impacts would result from the construction of temporary crossings or the placement of fill used to cross intermittent or ephemeral tributaries with little to no stream flow or the construction of temporary access roads. BLM acknowledges that, while temporary, these crossings would have the potential to impact stream morphology and ecological function. The modification of stream banks could result in removal of vegetation that could take many years to recover. Sedimentation potential would increase, depending upon the extent of disturbance and the amount of contouring needed. Storm water discharge and quantity of sedimentation to the San Pedro River and its tributaries are correlated to project-related disturbances. Permanent impacts would result from permanent stream channel crossings, into which structures are placed in the streambed, potentially causing an irreversible loss of riparian vegetation on either side of the crossing.

31 The BLM acknowledges in the DEIS that transmission line access roads typically cross, or are close to, perennial and intermittent streams. It has been well documented that construction of new access roads increases erosion and sedimentation of water resources.[31,32] All construction activities within the lower San Pedro River watershed could result in increased sedimentation to t he San Pedro River or its tributaries. Periodic vegetation removal or repair to access roads could have indirect effects because of soil erosion, further increasing sedimentation.

32 BLM acknowledges that implementation of the Sunzia Project will impact water resources within the study area. The construction of access roads, staging areas, work areas, and stream crossings will affect perennial and intermittent streams, water bodies, wetlands, wells, and springs. While impacts to water resources vary between alternative routes, BLM also acknowledges that the preferred alternative route within Route Group 4, Subroute 4C2c, would have the greatest impact on environmentally sensitive water resources. These adverse environmental impacts are both unnecessary and are completely avoidable.

33 We urge BLM to preserve the riparian habitats of the lower San Pedro River Valley. Any alternatives through the valley pose unnecessary and completely avoidable environmental risks to globally significant riparian areas. BLM should choose the No Action Alternative and evaluate upgrades to existing lines and other measures to meet the needs of the proposal. We strongly urge BLM to reject any alternatives that enable the construction of a utility corridor through one of the most ecologically important riparian areas in North America and to select the No Action alternative. If the BLM determines that an action alternative is necessary, adverse environmental impacts can be avoided by selecting or creating a different alternative route that does not traverse the lower San Pedro River Valley. BLM should select a route for the SunZia project that avoids the lower San Pedro River valley entirely and that utilizes existing utility corridors in developed areas along or near the Interstate 10 freeway.

34 **V. BIOLOGICAL RESOURCES**

This project has the potential to affect at least 269 special status species (Section 3.6.1.2, pg. 3-70). This level of impact is unacceptable, especially considering that this high number does not include species that

[31] Bagley, S. 1997. Roads and erosion. Road RIPorter 2(5). Available online at http://www.wildlandscpr.org/biblio-notes/roads-and-erosion.
[32] Forman, R.T.T., and L.E. Alexander. 1998. Roads and their major ecological effects. Annual Review of Ecology and Systematics 29: 207-231, C2.

1600	Response to Comment
31	Comment noted. See response to comment #30.
32	Subroute 4C2c would have the greatest percentage of its length with potential for impacting water resources; whereas, Subroute 4C3 would have the greatest mileage of potential impacts to water resources. These increased potential for impacts are associated with greater crossings of streams and sole source aquifer.
33	Comment noted
34	As described in Section 3.6.1.2 of the DEIS, “approximately 700 special-status species were reviewed with 269 special-status species determined to have some potential for occurring within a study corridor that included a 4-mile buffer of either side of all proposed project subroutes.” Sources that were used for the inventory are listed in this section and Appendix B1 Biological Technical Report. The impacts to the special-status species for Route Group 4 are described in Section 4.6.5.4, and indicate which of the species and habitats would potentially be affected by the proposed Project. Species surveys would be conducted in affected areas identified in the Section 7 consultation with USFWS. The impact analysis for species other than Special-status species (e.g., migratory birds, and species of greatest conservation need) is based on the potential for suitable habitat within all the alternative corridors included within the studies of the EIS. Any surveys deemed necessary would occur prior to construction.

34 do not have a special designation. Additionally, the number of special status species could be higher as thorough surveys have not been conducted throughout the project area, and the sources the BLM used for data may be outdated or incomplete.

The DEIS does not acknowledge that the sources used to determine presence of a species in the project corridor do not provide a complete representation. For example, the Arizona Game and Fish Department's Heritage Data Management System (HDMS) relies on incidental observations and data from surveys that have been conducted in an area. Many observations and survey results are not reported and, therefore, are not included in the HDMS.

In order to gain a better understanding of what species may be affected by this project, thorough surveys need to be conducted within the project corridor and in the surrounding areas. These surveys should occur at different times of the day, in various seasons, and repeatedly through multiple years as some species may only be present or active during certain times of the day or year or may not be observed in a given year. Without this information, potential impacts from this project cannot be adequately represented.

35 We also question the Impact Assessment Methods. When determining what species may be affected by this project, the BLM used an eight-mile wide study corridor. However, when determining impacts to these species, the BLM used the centerline of the project, assuming that species would only be affected if the centerline crossed their range (Section 4.6.3, pg. 4-62). The BLM must recognize that effects of this project will extend far beyond the centerline of the project. As noted in the DEIS, erosion, increased recreational use, and other effects can be expected as a result of this project and can extend beyond the immediate project area, but these effects are glossed over in Chapter 4.

The BLM must also account for changing habitat and range of species. Many species alter their habitat or disperse to new areas, either naturally or as the result of stressors.[33,34] In addition, as climate change, drought, human development, and other factors alter habitat availability, quality, and range, species occurrence, range, and movement will shift. Most of the impact assessments in the DEIS only account for the current range or known locations of the affected species. This is an inadequate assessment.

36 Related to this, the BLM must also recognize the importance of maintaining habitat resiliency. For example, the DEIS states that "vegetation management needs may reduce the potential for future recovery of riparian woodland" (pg. 4-92). This is a significant impact as it represents a long-term degradation of habitat important for a variety of species. However, the BLM does not address the effects of such an impact, nor does it provide suitable mitigation measures.

We have included some specific concerns about DEIS and certain species, but it is not a comprehensive list.

a. Wildlife

i. Mammals

[33] Kirkpatrick, M., and N.H. Barton. 1997. Evolution of a species' range. The American Naturalist 150(1): 1-23.
[34] Davis, A.J., L.S. Jenkinson, J.H. Lawton, B. Shorrocks, and S. Wood. 1998. Making mistakes when predicting shifts in species range in response to global warming. Nature 391: 783-786.

1600	Response to Comment
35	In cases where erosion, sediment transport, or other mechanisms could affect aquatic and other species away from the centerline, the potential for impacts was acknowledged and mitigation measures would be employed if appropriate. Changes in the range of species cannot be predicted, but effects to any special-status species would be considered over the lifetime of the Project. If, for example, a listed species not occurring in the Project area at the time of construction was found to occur there later, consultation with the USFWS would be reinitiated.
36	The BLM preferred alternative does not cross any areas of wet-riparian woodland in Arizona, although some mesquite bosque may be affected by vegetation management needs at the San Pedro River. This would be minimized by spanning the river via elevated terrain on both banks. Effects to riparian woodland that supports listed species such as the Southwestern Willow Flycatcher would be assessed in detail during Section 7 consultation. Impacts on other alternatives may be somewhat higher, but would not affect any large blocks of mature or recovering riparian woodland. Each proposed river crossing location is outside or near the end of river reaches with perennial flow. Similar standard and selective mitigation measures would be used at any crossing location, to minimize the need for riparian vegetation management.

1600

American pronghorn (*Antilocapra americana*)

The management of pronghorn and their habitat represent an important conservation issue for North American grasslands, as pronghorn are an indicator of grassland ecosystem health and are valued as a wide-ranging, native game animal. Because pronghorn range widely to access the most succulent forage available at different locations at various times of the year and often return to specific fawning grounds, they are a landscape-connectivity dependent species.[35,36] This means that their life history requirements necessitate an ability to move freely between resource patches, which are often spread out across large landscapes.

Pronghorn have declined in Arizona over the past two decades. In 1987, the statewide population of pronghorn was estimated at nearly 12,000, but by the year 2000 the population estimate had declined to less than 8,000.[37] Grassland habitats in Arizona and New Mexico continue to be subjected to extended drought, habitat conversion and fragmentation from urban and agricultural development, and woodland encroachment. Therefore, the conservation and restoration of remaining viable pronghorn summer and winter ranges, as well as seasonal migration corridors, is even more important if pronghorn populations are to recover.

37

Pronghorn are especially sensitive to development and habitat fragmentation. This project has the potential to impact the Sulphur Springs Valley population. The DEIS discusses some of the potential impacts but does not thoroughly analyze these. For example, on pg. 4-85, the DEIS notes that potential impacts include creation of new access within previously undisturbed areas of the valley and could encourage development or support increased recreation. This is a long-term and significant impact. The DEIS then contradicts the above statement by saying that impacts during the operations phase would be minimal. The BLM needs to more thoroughly assess potential impacts to species such as this.

The clearance of shrubs in shrub-invaded grasslands associated with this project could actually benefit pronghorn in some areas. The Final EIS should also more comprehensively assess the potential impacts of road construction (i.e. habitat fragmentation), vehicular traffic, and associated disturbance upon pronghorn and pronghorn habitat quality.

Bats

38

As part of the preconstruction surveys, the DEIS says that surveys for bat roosts would be conducted within 0.25 mile of the project right-of-way and that occupied roosts will be avoided. Who will conduct these surveys? Many bat species are highly specialized and can be difficult to locate within their roosts, even by highly trained and qualified biologists. Also, what is the likelihood that roosts will be destroyed, whether occupied

[35] Friederici, P. editor. 2003. Ecological Restoration of Southwestern Ponderosa pine Forests. Island Press, Washington, D.C., USA, 651 pp.
[36] van Riper and Ockenfels 1998 Yoakum, J.D. 2002. An Assessment of Pronghorn Populations and Habitat Status for Anderson Mesa, Arizona: 2001-2002. Prepared for the Arizona Wildlife Federation. 130 pp.
[37] Arizona Game and Fish Department. 2001. Wildlife 2006: The Arizona Game and Fish Department's Wildlife Management Program Strategic Plan for the Years 2001-2006.

16

1600	Response to Comment
37	The BLM has discussed and will continue to coordinate with the Arizona Game and Fish Department to minimize impacts to Pronghorn populations in the Sulphur Springs Valley (Subroute 4B) or Allen Flat (all 4C subroutes). Although highways, improperly designed fences, and other "hard" barriers can fragment Pronghorn habitat, transmission lines do not restrict Pronghorn movement. Vegetation management within the right-of-way that reduces shrub cover could facilitate Pronghorn use of the right-of-way as a dispersal corridor. The DEIS (Section 4.7) does acknowledge that the potential for restrictions on wildland fire use as a management tool may occur as a result of the Project, although this could be partially mitigated with other means of vegetation management.
38	All surveyors would be qualified, permitted, and approved by the appropriate agency for any surveys they conduct. All routes avoid large, mature riparian trees that would be the most suitable roost sites for tree-roosting bats. Any information available would be considered regarding the distribution of tree-roosting bats and specific locations where they may occur, to allow design and mitigation measures to reduce or avoid effects to those species and their roost sites.

38 or not? Bats use different roost sites during different times of the night and in different seasons.[38] Just because a roost is not occupied at the time of the preconstruction survey does not mean that it is not utilized or of importance.

Impacts to tree-roosting bat species, such as the western red bat (*Lasiurus blossevillii*) or western yellow bat (*Lasiurus xanthinus*), are not discussed. Note that both of these species are special status and have a high likelihood of being present or are present (respectively) in the project area. They are mentioned in Appendix B1, but no impacts as a result of this project are discussed. How will this project affect tree-roosting bats? As noted in Appendix B1, vegetation removal is a primary threat to these species. Will preconstruction surveys be conducted to identify presence of these species in the project corridor? When roosting, these species can be very difficult to locate.

White-sided jackrabbit (*Lepus callotis*)

39 This state-listed endangered species is endemic in the United States to a very small range of high-quality grasslands in southwestern New Mexico's Hidalgo County. Due to its habitat requirements for intact grasslands, it is an important indicator species for the health of southwestern desert grasslands. While it was found not warranted for Endangered Species Act (ESA) listing in 2010, it is nonetheless a very rare species and is heavily dependent upon grassland conservation and restoration measures for its population survival. The DEIS does not analyze impacts to this species. Links B150a, B140, and B112 are located within the historic range of this species.

BLM should consult with the New Mexico Department of Game and Fish (NMDGF) to determine what conservation measures may be appropriate for this species.

ii. Birds

This project poses a significant threat to many avian species. Habitat loss, degradation, and fragmentation; direct mortality from construction, operation, increased recreation use, and collision with transmission line structures; disturbance resulting in altered behaviors, reduced nest success, etc.; reduced water quality due to erosion and sedimentation; and much more all have the potential for significant impacts to these species. The mitigation measures discussed in the DEIS have the potential to reduce some of these impacts, but many avian species will still be negatively affected by this project. The DEIS admits that potentially significant impacts could occur but then downplays the significance of those impacts when discussing individual species.

40 Appendix B2 provides information from avian surveys that were conducted at the San Antonio crossing of the Rio Grande River alternatives. While these surveys provide some information about avian use of the Rio Grande at these locations, they are far from complete. Surveys did not occur year-round and, in fact, missed a key time when some bird species are present or most active (April–August). The surveys were also only conducted during one year, which does not account for the occurrence of different species and varying species abundance in different years. Because of this, it is unknown

[38] Tyburec, J. Bats. Arizona Sonora Desert Museum. Available online at http://www.desertmuseum.org/books/nhsd_bats.php. Accessed on 21 August 2012.

1600	Response to Comment
39	The historical range of the species, as presented in the USFWS 2010 finding that listing of the White-sided Jackrabbit was not warranted, does not include any portion of the Project area. The historical range included the southern Playas and Animas valleys in New Mexico, approximately 50 miles to the south of the Project area. The White-sided Jackrabbit is listed as sensitive by the BLM NM State Office, and all applicable special-status species policies would be followed regarding the species.
40	BLM believes that the avian study was properly exercised and the results are a reasonable representation of daily movements of birds in the middle Rio Grande Valley during the winter months. There was limited determination of distance between birds and existing conductors or groundwires in the study since only two of four study sites had wires present. The most critical measurements were made of birds traveling north from Bosque del Apache in the morning and returning to Bosque del Apache in the late afternoon/evening. The elevation of these birds was determined using range finders and showed that most movement was well above where lines for the SunZia project would cross the Rio Grande. In addition to the BLM study, it has been shown that increased collisions with transmission lines do not generally occur where the transmission line in question is more than one mile from bird use areas (Brown et al. 1984, 1987). In the case of SunZia, the BLM preferred alternative crossing of the Rio Grande is several miles north of the Bosque del Apache National Wildlife refuge, where the birds of concern roost and loaf, and several miles south of the area where the birds go to forage during the day. The floodplain at this location is relatively narrow, providing less farmland that may be used for foraging than other alternative crossing locations.

40 how many species that utilize this area would be affected by the transmission lines or the rate of collisions. Similarly, this information cannot be extrapolated to other sites, including to the north crossing alternatives. Bird presence and flight patterns could differ significantly between these areas. Also, collisions observed at the proposed Armendaris Ranch crossing alternative (which has since been dropped from consideration) cannot be extrapolated to estimate collisions from this project as the existing transmission line at this location is much smaller than the proposed project.

41 **Raptors**

With regards to raptors, the DEIS states that "disturbance of nesting raptors ***may*** be avoided by constructing outside of nesting season" (pg. 4-68, emphasis added). When would such disturbance not be avoided? Also, many raptors use the same nest each year. Will existing nests be avoided? Further analysis is needed in order to adequately understand these impacts.

The DEIS states that "SE 4 and 6 ***may be*** employed to minimize public access to areas occupied by nesting golden eagles" (pg.4-72, emphasis added). What is meant by "may be"? When would these mitigation efforts not be employed? Why is this not further analyzed in the DEIS?

42 **Snow geese** (*Chen caerulescens*)

At various times of the year, the snow goose can be found in almost every state or province of North America. Migrating snow geese concentrate in large numbers at many sites along traditional flyways across the continent. Always near water, snow geese breed on open, coastal tundra dominated by grasses and sedges. During migration they use both fresh and saltwater marshes, ponds, lakes, streams, meadows, and agricultural lands. Wintering snow geese inhabit a variety of marine and freshwater wetlands, including grassy marshes, wet fields, rice plantations, farm fields with waste grain, and open pastures.[39]

The DEIS should analyze and avoid migratory flyways and important habitats for this species in order to prevent collisions and population-level impacts. We recommend avoiding spanning bodies of water or placing lines between heavily-used bodies of water and landscape contexts in which the overhead static wire is obscured or hard to see. BLM should confer with the USFWS to determine and implement best practices for reducing transmission line and guy wire collisions with snow geese and all bird species.

iii. Amphibians

43 The DEIS greatly downplays potential impacts to amphibian species. Typically, it is assumed that such species will only be affected in areas where perennial water occurs. However, as discussed below, intermittent and ephemeral waters can be very important to a variety of species, including various amphibians.

Chiricahua leopard frog (*Lithobates chiricahuensis*)

[39] See Audubon species account at http://www.audubon.org/species/snogoo.

1600	Response to Comment
41	Emergency situations may occur where disturbance of nesting raptors could not be avoided. An Avian Protection Plan will be developed, and will address issues related to compliance with the Bald and Golden Eagle Protection Act. The phrasing referred to in the comment was intended to indicate that some existing access roads may not be closed, or that no road closures would be necessary if no Golden Eagle nests are present. This has been clarified in the FEIS (Section 4.6.4.5) and addressed in the Avian Protection Plan.
42	Development of an Avian Protection Plan will include detailed information on selection and placement of mitigation measures to reduce the risk of collision to all birds.
43	Chiricahua Leopard Frogs are not known to occur along the Project centerline or at any location downstream from the Project, on the Ladder Ranch or elsewhere. The distribution of and potential effects to Chiricahua Leopard Frogs will be analyzed in detail during Section 7 consultation. Other amphibians within the Project area would primarily be summer-breeding species, including several species of toads as well as the Canyon Treefrog. Temporary pools used by these species would be avoided, whether in canyons or valley-bottom livestock tanks and other similar sites. The Lowland Leopard Frog is also present in several canyons within the San Pedro River Valley. All of these canyons would be spanned by the Project, and would not be crossed by new access roads. Standard and selective mitigation measures to avoid impacts to streams and other water sources address all of these potential issues.

43 As the DEIS acknowledges, Ladder Ranch supports some of the last remaining populations of Chiricahua leopard frogs in New Mexico. The project crosses Ladder Ranch and has the potential to affect the streams in which this species occurs. However, the DEIS states that no effects to the species are anticipated because the project would cross downstream from any perennial flow. The BLM must consider ephemeral and intermittent waters, not just perennial streams. Ephemeral and intermittent drainages can be of great importance to this species.[40] With regards to this species, with reference to both perennial and ephemeral waters, the USFWS states that, "for Chiricahua leopard frogs, defining the action area of a proposed project must consider the reasonable dispersal capabilities of the species, and the likelihood/extent of any downstream or upstream effects that might arise from the proposed action."[41]

Other amphibian species are likely to be similarly affected. The BLM needs to reconsider impacts to amphibian species, providing consideration to all areas that could be utilized by the species, not just perennial waterways.

iv. Reptiles

44 The DEIS also downplays potential impacts to reptiles. While the DEIS identifies the potential for construction related activity to cause direct mortality, there is no discussion of impacts related to fragmentation caused by road construction. The DEIS also recognizes that people's attitudes toward snakes is a primary threat, as many are purposefully killed. We appreciate that the BLM has acknowledged this and seeks to reduce this risk through resource awareness training. However, will killing of snakes be prohibited or just dissuaded? How will such actions be monitored?

v. Fish

45 Again, the DEIS only considers impacts to areas where perennial water occurs. However, many fish species utilize ephemeral waters for dispersal, etc. The BLM must consider how the various fish species found in or near the study corridor may be affected for all water sources.

vi. Invertebrates

46 Information regarding invertebrate species is, unfortunately, lacking, as is acknowledged in the DEIS (Section 3.6.5.6, pg. 3-83). As noted above, without an understanding of what species occur in the project area, it is impossible to know the full extent of impacts caused by this project. As the DEIS notes, many invertebrate species are highly endemic and may only occur in relatively small areas. If such species occur within the project area, this project has the potential to disrupt the required habitat and have significant negative impacts on the species, including impacts at both the population or species level.

[40] Southwest Endangered Species Act Team. 2008. Chiricahua leopard frog (Lithobates [*Rana*] *chiricahuensis*): Considerations for making effects determinations and recommendations for reducing and avoiding adverse effects. U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, Albuquerque, New Mexico. 75 pp.
[41] *Ibid.*

1600	Response to Comment
44	The potential for a "road effect" is discussed regarding the Desert Tortoise. Limited additional information is available regarding unimproved access roads and resulting fragmentation to reptile habitat. Contractor awareness training would present all applicable laws, regulations, and policies, and any additional Project-specific stipulations. Biological monitors would be present in most or all locations throughout construction, and would document and report any violations of those laws, regulations, policies, or stipulations to the appropriate agency contact and the CIC.
45	A single native fish species, Longfin Dace, may be present in ephemeral streams at locations crossed by the Project. Discussion has been added in reference to this species' use of ephemeral streams. However, all of these streams would be spanned and would not be directly affected by the Project.
46	No known special-status or local endemic invertebrates are known to occur in areas where they may be affected by the Project in Arizona. A single link is located near a spring supporting an ESA-listed snail in New Mexico. For this reason in part, the link is not a portion of the BLM preferred alternative.

Snails

47 Appendix B1 states that talussnails are present in the project area and acknowledges that habitat degradation and loss are the primary threats to these species. However, the DEIS does not discuss any impacts related to this project nor any mitigation efforts.

The Rosemont talussnail (Sonorella rosemontensis) is a candidate species under the ESA. In March 2012, the USFWS issued a pre-proposal notification regarding this species,[42] stating that information indicates that the species may need protection afforded under the ESA as threatened or endangered.

The Sonoran talussnail (*Sonorella magdalenensis*) is similarly being considered for listing as threatened or endangered under the ESA. A notice published in the Federal Register in July 2012 states that listing of this species may be warranted, and the USFWS is in the process of reviewing the status of the species.[43]

Provided this information, the BLM must analyze potential impacts to these species. Many snail species are highly specialized and are often found in very small areas. This project could have very significant impacts on these populations and could jeopardize the species.

48 **vii. Special-status wildlife species**

The various alternatives in the DEIS would affect hundreds of special status species and would traverse and potentially negatively affect designated critical habitat for the southwestern willow flycatcher, Mexican spotted owl, Gila chub, and Rio Grande silvery minnow. The No Action alternative is the only alternative that will completely avoid negative impacts to these species and their critical habitat.

For special status species, the BLM must adhere to its special status species policy: "Objectives of the BLM special status species policy are to 1) conserve and/or recover ESA-listed species and the ecosystems on which they depend so that ESA protections are no longer needed for these species; and 2) initiate proactive conservation measures that reduce or eliminate threats to BLM sensitive species to minimize the likelihood of and need for listing of these species under the ESA."

The most prudent and cost effective way to achieve these objectives is close consultation with the U.S. Fish and Wildlife Service (USFWS) and the Arizona Game and Fish Department (AZGFD), avoidance through robust screening, monitoring, effective mitigation, and application of the precautionary principle.[44]

[42] U.S. Fish and Wildlife Service. Pre-proposal notification and information request for the Rosemont Talussnail. Memo. 12 March 2012. Available online at http://www.fws.gov/southwest/es/arizona/Documents/SpeciesDocs/RosemontTalussnail/Rosemont%20talussnail%20Preproposal%20notification.PDF.

[43] Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition to List the Sonoran Talussnail as Endangered or Threatened. Federal Register, Vol. 77, No. 142. 24 July 2012. Pp. 43218–43222.

[44] The most broadly accepted definition of the Precautionary Principle is Principle #15 of the June 1992, Declaration of the Rio Conference on Environment and Development, which reads: "In order to protect the environment, the precautionary approach shall be

1600	Response to Comment
47	Talussnails may be present in the Project study area. However, none are known to occur along the Project centerline, and suitable steep, rocky habitat is avoided. The Rosemont Talussnail is restricted to the Santa Rita Mountains outside the Project area. The Sonoran Talussnail occurs in the southern Tucson Mountains, on Tumamoc Hill near Subroute 4C3. However, no suitable habitat would be crossed by this subroute as the line would be sited in the bed of the Santa Cruz River at this location.
48	Comment noted

49

In section 4.6.3.1, the DEIS states that "significant impact on biological resources could result if any of the following were to occur from construction or operation of the proposed action." One of the impacts listed is "[f]ragmentation resulting from the addition of new infrastructure to large, currently intact blocks of habitat." As such, we anticipate that habitat fragmentation associated with the construction and/or improvement of roads, as well as disturbance from maintenance activities associated with SunZia and subsequent disturbance associated with increased public access, would have a significant impact on the following terrestrial special status wildlife species with relatively large, intact habitat blocks in the affected region: jaguar, ocelot, jaguarundi (if present), Mexican gray wolf, desert bighorn sheep, New Mexico meadow jumping mouse, Arizona striped whiptail, Sonoran desert tortoise, Tucson shovel-nosed snake, northern Mexican garter snake, northern aplomado falcon, cactus ferruginous pygmy owl, and Sprague's pipit, among others. Most, if not all, of these species have been documented to be sensitive to habitat fragmentation and human disturbance. Should the project move forward to construction, the project proponent should consult with the USFWS and the state wildlife agencies for both Arizona and New Mexico to determine site-specific and/or off-site mitigation measures to avoid, minimize, and offset impacts from fragmentation and disturbance to these species. A crucial mitigation measure that should be implemented globally is to tightly restrict vehicular access to transmission line access roads, so as to avoid an increase in human-related impacts that are facilitated by access, such as direct mortality from vehicle collisions and poaching and disturbances that affect habitat quality such as noise, pollution, accelerated erosion, and the accidental introduction and spread of non-native species. Additional information about some of these species follows.

Lesser long-nosed bat *(Leptonycteris curasoae yerbabuenae)*

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The lesser long-nosed bat is listed as endangered under the ESA. Because it migrates long distances and is one of the nectar-feeding bat species, it must time its travel to coincide with the flowering or fruiting activity of its food plants. The floral resources they depend upon have been threatened by wildland habitat conversion and fragmentation, and maternity roost sites (located in caves and abandoned mines) are sensitive to human disturbance. The SunZia study corridor is located at the northern limits of the range of the lesser long-nosed bat, and, as noted in the DEIS, two know roosts are within four miles of the project centerline. There is also the possibility that additional, undocumented roosts could exist within the study area, as it contains concentrations of agaves that could be used as food sources by this species. The lesser long-nosed bat is known to be capable of traveling long distances, in the range of 30 to 60 miles, in a single night to forage.[45] The proximity of the study corridor to other known roosts makes it likely that these populations forage within the study corridor occasionally.

widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

[45] U.S. Fish and Wildlife Service. 1994. Lesser long-nosed bat recovery plan. U.S. Fish and Wildlife Service, Albuquerque, New Mexico. 45 pp.

1600	Response to Comment
49	Impacts to all listed species will be addressed in detail during Section 7 consultation. Note that no alternative would affect the Mexican Spotted Owl or its designated critical habitat, and that designated critical habitat for the Rio Grande Silvery Minnow would be spanned. The BLM will follow all applicable special-status species policies, to ensure that the recovery of listed species is facilitated and that the Project does not contribute to the need to list additional species.
50	No known roosts of Lesser Long-nosed Bats would be affected by any alternative. Mitigation, including stipulations related to salvage and replanting of forage plants, will be determined during Section 7 consultation.

50 In addition to the above general comments about bats, the DEIS also notes that lesser long-nosed bats are likely to use different roosts in different years to be closer to better foraging areas (Section 3.6.6.1, pg. 3-84). If an important roost site is disrupted or destroyed as part of this project, that could have significant impacts on this species. However, such an impact is not discussed in the DEIS.

The BLM should consult with the USFWS regarding conservation measures for this endangered species. Agave and saguaro that would need to be removed should be transplanted near the removal site, and additional plants should be planted for mitigation (and to account for possible unsuccessful transplants) at a minimum of a 3:1 ratio. In addition, the Final EIS must adequately analyze potential cumulative effects of energy development that would be enabled by the construction of SunZia.

Mexican long-nosed bat (*Leptonycteris nivalis*)

51 The DEIS cites a study from 1994 that indicates that the species is not anticipated to occur in the study corridor. Does the BLM have any information more recent than 1994 to support this statement? The BLM should not rely on survey records from nearly 20 years ago in order to determine absence of a species. Thorough surveys must be done for species such as this. Without that information, the BLM cannot estimate potential impacts from this project.

New Mexico meadow jumping mouse (*Zapus hudsonius luteus*)

52 The DEIS says that small mammal surveys will provide information on the local status of the New Mexico meadow jumping mouse (pg. 4-70). Are these surveys planned? What happens if this species is located within the areas to be developed? Will surveys also be conducted just prior to construction to ensure that this species is not present in the construction area, and will construction be halted if the species is located?

Mexican gray wolf (*Canis lupus baileyi*)

53 The Mexican gray wolf does not currently occur in the project area, but this area does include suitable and historic habitat for this critically endangered species. The Mexican gray wolf is a subspecies of the gray wolf, and is the most endangered type of wolf in the world. After being extirpated in the United States and with only a few animals remaining in Mexico, Mexican wolves were bred in captivity and reintroduced to the wild in Arizona beginning in 1998. The goal of the reintroduction program, which is only a first step toward full recovery, was to restore at least 100 wolves to the wild by 2006; unfortunately, at the end of 2011, there were only 58 wolves in the wild in Arizona and New Mexico. This species remains critically endangered.

A wolf reintroduction effort is also underway in Sonora, Mexico. If a strong population of wolves is established there, it is quite likely they would range northward, including into areas affected by the proposed project. Much of the proposed corridor borders the southern boundary of the 10j reintroduction area for the species and so may particularly affect dispersal and genetic exchange between populations now being established in Mexico and those in the US. The entire SunZia planning area is within the Sky Islands region, which could be identified as a key recovery area in the revised recovery plan that

1600	Response to Comment
51	Additional records from 2008-2009 for the Mexican Long-nosed Bat have been provided by the BLM Las Cruces District Office. The species has been recorded within foraging range of the Project, although no known roosts would be affected. Mitigation measures for the Lesser Long-nosed Bat would minimize impacts to either species.
52	No suitable habitat for the New Mexico Meadow Jumping Mouse is present, and the species is not known to occur outside Bosque del Apache NWR in the vicinity of the Project. If suitable habitat recovers in the future and may be affected by maintenance actions, surveys would be conducted prior to any non-emergency maintenance.
53	Potential impacts to the Mexican Gray Wolf will be considered during conference with the USFWS. Discussion has been added in reference to the Sonora, Mexico reintroduction and how that may affect movement through the Project area.

53

is now underway. North/south habitat linkages for this species are particularly important to protect. New access roads associated with SunZia could provide new access into wolf habitat. The level of vehicular access is directly related to the relative level of habitat security for this species as these wolves are particularly at risk to illegal killings.

The DEIS fails to adequately evaluate the impact of the proposed SunZia project on the Mexican gray wolf. It states that "the potential for the species occurring at present or in the future within the study corridor or being affected by any phase of Project development or operation is very low" (pg. 4-71). That assumption is not defensible as, even with the current low numbers in the wild, Mexican gray wolves have ranged across various portions of the proposed SunZia project planning area in search of new territory. Such occurrences will likely occur more often as the population grows and disperses. The Five-Year Review of the Mexican gray wolf recovery program found that movement distances for lone wolves averaged 87 ± 10 km (54 ± 6 mi).[46] In addition, newly introduced Mexican wolves in northern Sonora, Mexico, could also range into the SunZia project planning area.

The BLM must fully analyze the potential effects of creating new roads and public access, including vehicular access, into occupied and potential Mexican gray wolf habitat. SunZia and BLM should consult with the USFWS regarding conservation measures for this species and policy changes anticipated in the new revised recovery plan and associated rulemaking – as the recovery plan will likely be finalized prior to the construction of SunZia.

Jaguar (*Panthera onca)*

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The DEIS assumes that no impacts will occur relative to jaguar, provided how little information is known about the occurrence of this species in the U.S. However, jaguars have been positively identified in Arizona and may travel through the study corridor.

"Jaguars in the United States are likely dispersing males from breeding populations in northern Mexico. Movement corridors are important to maintain; however, human developments may block access to corridors or fragment contiguous habitats needed to sustain a home range. Fences and highways may be particularly damaging for movement corridors."[47] The United States portion of the jaguar's range coincides with the proposed transmission route in Cochise, Pima, Santa Cruz, and Hidalgo counties,[48] making it essential that SunZia planning limit habitat fragmentation and preserve movement corridors for this species. Areas with moderate to high quality jaguar habitat should be given particular consideration, including the area in and surrounding Steins Pass at the Arizona/New Mexico border, the area within approximately 25 miles east of Willcox, Arizona, and between Tucson, Arizona, in the west and State Highway 191 in

[46] Mexican Wolf Interagency Field Team. 2005. Mexican wolf Blue Range reintroduction project 5-year review: technical component. Available online at http://www.fws.gov/southwest/es/mexicanwolf/pdf/MW5YRTechnicalComponent20051231Final.pdf.
[47] U.S. Fish and Wildlife Service. 2012. ECOS Species Profile for jaguar (Panthera onca). Available online at http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A040. Accessed 29 May 2012.
[48] Hatten, J.R., A. Averill-Murray, and W.E. Van Pelt. 2003. Characterizing and Mapping Potential Jaguar Habitat in Arizona. Arizona Game and Fish Department Technical Report 203, Nongame and Endangered Wildlife Program. Available online at http://www.azgfd.gov/pdfs/w_c/jaguar/characterizing_mapping.pdf.

1600	Response to Comment
54	No Jaguars have been recorded in or near the Project area or north of Interstate 10 in several decades. The DEIS (Section 3.6.6.1) acknowledges that this could occur, but is somewhat unlikely given the current status of Jaguars in Arizona and northern Sonora. (*From the FEIS: All recent Jaguar records in the United States have been of single males and have come from mountains along the border with Mexico; none from within the study corridor. However, individuals could possibly travel farther north into the study corridor in the future. Critical habitat was proposed for the Jaguar in 2012, but none within or north of the study corridor after the USFWS considered the lack of recent records and barriers to dispersal formed by Interstate 10 and other infrastructure (USFWS 2012*)). No portion of the critical habitat proposed by the USFWS in 2012 would be affected by the Project. However, other potential effects to the species will be analyzed in detail during Section 7 consultation.

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the east. North/south habitat linkages for this species are particularly important to protect, and tend to coincide with areas with riparian corridors, lands with moderate to high vegetation cover, and rough terrain.

The DEIS assumes that the potential for jaguars occurring within the project area is very low. This is not a defensible assumption, however. Comprehensive field surveys to detect and monitor this elusive cat species have not been conducted to date, and their habitat selection in the northern portion of their range is poorly understood. Therefore, instead of dismissing potential effects, the DEIS should analyze the impacts SunZia could have upon vegetation associations jaguars have been known to utilize, habitat connectivity for this species, and increased human presence and disturbance in areas containing what is thought to be suitable habitat.

The USFWS recently proposed critical habitat for the jaguar, including in areas to be affected by the SunZia project.[49] The DEIS neither mentioned nor analyzed the impacts this project would have if critical habitat for this species is approved, which could occur as early as next year.

The BLM must analyze the impacts the proposed SunZia project would have on vegetation associations, habitat connectivity, and habitat suitability for the jaguar. Many mitigation measures that would apply to ocelot apply to the jaguar as well. The BLM should consult with the USFWS and state wildlife agencies regarding conservation measures for this species and mitigate consistent with the current draft recovery plan, as the recovery plan will likely be finalized prior to the construction of SunZia.

Ocelot (*Leopardus pardalis*)

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The DEIS assumes that no impacts will occur relative to ocelot, provided how little information is known about the occurrence of these species in the U.S. However, ocelots have been positively identified in Arizona and may travel through the study corridor.

A new recovery plan is being developed by the USFWS for this species. According to the draft recovery plan for the ocelot:

> [the species] is listed as endangered throughout its range in the western hemisphere where it is distributed from southern Texas through Central and South America into northern Argentina and Uruguay. No critical habitat has been designated for the ocelot. Currently the U.S. population has fewer than 100 ocelots, found in 2 separated populations in southern Texas, at the northern limit of the species' distribution. A third and much larger population of the Texas ocelot occurs in Tamaulipas, Mexico, but is geographically isolated from ocelots in Texas. The Sonoran ocelot was last documented in southern Arizona in 1964, and presently

[49] Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Jaguar; Proposed Rule. Federal Register, Vol. 77, No. 161. 20 August 2012. Pp. 50214–50242.

1600	Response to Comment
55	The DEIS, (Section 3.6.6.1), notes that Ocelots appear to have moved through the Project area recently, and are occasionally sighted in southern Arizona. Ocelots are known to prefer dense shrub cover, which is primarily found in riparian corridors in the Project area. No areas outside riparian corridors appear to have habitat structure similar to known Ocelot habitat, and impacts to the species are not expected to occur outside riparian areas. (*From the FEIS*: *The precise location of the sighting is not available, but the sighting could be near or within the southern portion of the study corridor.)*

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occurs in northwestern Mexico but little is known about its abundance and distribution.[50]

The DEIS (pg. 4-71) states, "The recent sightings could indicate an expansion of the species' range northward, but more likely represent vagrant animals from northern Mexico. Movements of ocelots in southern Arizona are likely to occur primarily along riparian corridors where elongated ribbons of dense vegetation provide cover for the animals' movements." Given that "little is known about its abundance and distribution," these statements regarding the ocelot are not grounded in science or fact, although riparian areas and those with dense shrub cover are, indeed, likely to be among habitat types preferred by ocelot in their northern range.[51] Until more field research is conducted to study and determine ocelot habitat selection in this northern portion of its range, all vegetation types with dense cover and an adequate prey base should be considered potential ocelot habitat.

The BLM must also consider that changing habitat – due to drought, climate change, and other factors – will shift the range and movement patterns for a variety of species, including the ocelot. The fact that two ocelot have been identified in Arizona in the last two years may indicate that such incidences may be increasing. The BLM must take these factors into account when determining possible impacts to species.

The BLM should consult with the USFWS and state wildlife agencies regarding conservation measures for this species and mitigate consistent with the current draft recovery plan, as the recovery plan will likely be finalized prior to the construction of SunZia. All of this should be considered in the Final EIS.

56

Jaguarundi (*Herpailurus yagouaroundi tolteca*)

The DEIS assumes that no impacts will occur relative to jaguarundi, provided how little information is known about the occurrence of this species in the U.S. Anecdotal reports of jaguarundi have occurred in areas near the study area, however; while these reports have not been confirmed, the BLM should recognize the potential for this species to occur in the project area and, therefore, analyze potential impacts. Without more definitive studies, the BLM cannot assume that this project will not have any impacts.

The BLM must also consider that changing habitat – due to drought, climate change, and other factors – will shift the range and movement patterns for a variety of species, including these cats.

57

Golden eagle (*Aquila chrysaetos*)

This wide-ranging and broadly-distributed species, protected by the Bald and Golden Eagle Protection Act (BGEPA), is likely to be impacted by transmission development to some degree, but because knowledge of their distribution and habitat use is so vague, the

[50] U.S. Fish and Wildlife Service. 2010. Draft ocelot (*Leopardus pardalis*) recovery plan, first revision. U.S. Fish and Wildlife Service, Southwest Region, Albuquerque, New Mexico.
[51] Lopez Gonzalez, C., D.E. Brown, and J.P. Gallo-Reynoso. 2003. The ocelot *Leopardus pardalis* in north-western Mexico: ecology, distribution and conservation status. Oryx 37(3): 358-364.

1600	Response to Comment
56	Although the USFWS does not consider Arizona part of the historic range of the Jaguarundi, the BLM has discussed potential impacts out of prudence, given the history of anecdotal reports. However, without confirmed information that the species may occur in the Project area, impacts are not expected to occur.
57	An Avian Protection Plan will be developed for the Project, which will address potential impacts to Bald and Golden Eagles. All facilities will be constructed to APLIC standards to prevent the risk of electrocution, and measures to minimize the risk of collision will be implemented where determined to be warranted. Note that electrocution risk is essentially precluded on 500 kV systems by the engineering requirements for separation between energized components.

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impacts of potential development in any particular area cannot be quantified with any accuracy and precision. This does not mean that population-level impacts do not need to be examined, but it does make filling information gaps for this species crucial, both at the local scale through sufficient study of the proposed project area as well as the landscape scale through population level surveys and monitoring.

Final eagle management guidance from USFWS is expected later this summer or fall. This guidance is intended to set fee structure, permit period duration, and preservation and compensatory mitigation standards for programmatic incidental take permits, providing a mechanism to modify them if necessary to safeguard eagle populations. This effort will require the rapid development of a detailed understanding of eagle regional populations, which will inform the implementation of many development planning efforts across the range of the species.

The BLM should consult with USFWS regarding what surveys should be conducted to predict potential eagle mortality and, if warranted, consider applying for an eagle incidental take permit. Although fatalities most often occur at smaller (≤ 69 kV) distribution lines, electrocution and collision are known causes of mortality for the golden eagle.[52] The design and layout of SunZia's towers, transmission lines and guy wires should minimize risk to eagles. We recommend SunZia develop an Avian Protection Plan (APP) and follow best practices laid out by USFWS,[53] NMDGF,[54] and the Avian Power Line Interaction Committee (APLIC).[55]

Bald eagle (*Haliaeetus leucocephalus*)

58

Much of the information regarding the golden eagle provided above also applies to the bald eagle. In addition, the DEIS downplays potential impacts to this species by assuming that this species does not occur in areas where permanent water is lacking (Section 3.6.6.1, pg. 3-91). However, no citation is provided to justify this statement. While it is true that bald eagles are most often found in areas with open water, they can be seen in areas without these permanent sources, especially during non-nesting or migration periods. In fact, some bald eagles spend a significant amount of time in areas far from water.[56] The BLM must take this into account and not assume that the only impacts to this species will occur along waterways within the study area.

Mexican spotted owl (*Strix occidentalis lucida*)

[52] Bevanger, K. 1998. Biological and conservation aspects of bird mortality caused by electricity power lines: a review. Biological Conservation 86(1): 67-76.
[53] Avian Power Line Interaction Committee and U.S. Fish and Wildlife Service. 2005. Avian Protection Plan (APP) Guidelines. Available online at http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/APP/AVIAN%20PROTECTION%20PLAN%20FINAL%204%2019%2005.pdf.
[54] New Mexico Department of Game and Fish. 2003, Power line Project Guidelines. Available online at http://wildlife.state.nm.us/conservation/habitat_handbook/documents/PowerlineProjectGuidelines.pdf.
[55] Avian Power Line Interaction Committee. 2006. Suggested practices for avian protection on power lines: the state of the art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission, and Sacramento, Washington, DCCA, U.S.A.
[56] U.S. Fish and Wildlife Service. 2010. Bald eagle conservation. Available online at http://www.fws.gov/midwest/eagle/conservation/baea_nhstry_snstvty.html. Accessed 20 August 2012.

1600	Response to Comment
58	See comment No. 57.

59

The DEIS states that no impacts are anticipated for the Mexican spotted owl (pg. 4-74), a threatened species under the ESA, and, therefore, no mitigation measures are proposed. However, the project would cross through critical habitat for this species. Critical habitat is essential for the conservation of species such as these. The DEIS notes that no habitat suitable for this species occurs within approximately 0.5 mile of the reference centerline of the project. The final alignment/placement of the line has not yet been determined, though, so how can this determination be made?

Threats to this species include loss of habitat, particularly old growth forests, disturbance, and impacts from climate change. Locating the transmission corridor away from forested areas and consulting with USFWS to ensure consistency with the species' recovery plan will be essential in corridor planning.

The DEIS acknowledges that this species may occur in the project study area, in the Galiuro Mountains/Aravaipa Canyon, Rincon Mountains, and in the southeastern portion of the Magdalena Mountains. We question if 0.5 miles is an appropriate distance for determining impacts to this species, as the project area may contain foraging habitat. Avoidance, minimization, and mitigation measures consistent with the recovery plan (and implemented in consultation with USFWS) may be warranted for any instances in which the transmission corridor crosses constituent elements of designated critical habitat. The DEIS indicates no mitigation measures for this species.

The BLM should consult with the USFWS regarding conservation measures for the Mexican spotted owl. If the project is determined to have key constituent elements or foraging habitat for this species, mitigation measures should be identified and implemented.

Northern Aplomado falcon (*Falco femoralis*)

60

Listed as endangered in southern and western Texas, this species exists as an experimental population in New Mexico. Falcons are threatened by habitat destruction and disturbance at nest sites and may experience direct mortality due to collisions with construction cranes, trucks, or wires and powerlines. Noise and human activity may displace the birds, and removal of nesting sites impacts their reproductive activities.

Both of the primary new build alternative routes in southern New Mexico would cross suitable habitat for this species. Transmission, planning, and construction of the proposed line should be consistent with the species reintroduction plan and its objectives to avoid negative impacts to the falcons. In addition, the Final EIS must adequately analyze potential cumulative effects of energy development that would be enabled by the construction of SunZia. For example, recent wind development (Macho Springs) in the Nutt Grasslands area, the same area where SunZia is proposed to be routed, has led to the decision to not reintroduce these endangered birds into highly suitable habitat in the Nutt Grasslands due to potential conflicts with wind turbines. We anticipate SunZia will enable future wind, solar, and natural gas development to occur that could not only directly impact suitable habitat and the likelihood of successful natural dispersal and establishment of new populations but could also preclude or dissuade reintroduction efforts in suitable habitats. Therefore, the impact to Aplomado falcon recovery and recovery efforts must be better analyzed.

1600	Response to Comment
59	No alternatives cross through designated critical habitat for the Mexican Spotted Owl. Subroute 4C3 approaches within approximately 0.25 miles of designated critical habitat in the Rincon Mountains east of Tucson, although no suitable habitat is present at this location. No suitable habitat is anticipated to be affected on any other alternative. However, potential effects to all listed species will be considered in further detail in Section 7 consultation.
60	A substantial proportion of proposed routes through Aplomado Falcon habitat are parallel to existing transmission, minimizing additional impacts to the species. Further impacts related to disturbance or loss of existing raptor nests would be minimized through standard and selective mitigation measures.

60

The DEIS (pg. 4-73) states, "Large areas of available but unoccupied habitat, coupled with the naturally low densities of Aplomado Falcons, would preclude significant negative effects of Project construction related to habitat loss." While it is true there are large areas of unoccupied and suitable habitat for the falcon in the project study area, we do not see any basis for the assumption that naturally low densities of this species would preclude significant negative effects from occurring. Effects to this species will depend largely upon the final route that is selected and that route's proximity to occupied habitat and nest locations. Modifying or creating hazards in suitable and unoccupied habitat could preclude birds dispersing or being reintroduced there, which could have significant negative impacts on the species' ability to be recovered.

The BLM should consult with the USFWS regarding conservation measures for this species and conduct mitigation consistent with the current recovery plan. The Final EIS must adequately analyze direct, indirect, and cumulative effects of the selected SunZia route to the Aplomado falcon. Specifically, BLM must analyze the impacts of SunZia, and the foreseeable energy development it would enable, upon Aplomado falcon habitat suitability, recovery, and recovery efforts.

Yuma clapper rail (*Rallus longirostris yumanensis*)

61

The DEIS assumes that the proposed project would not present a significant risk to Yuma clapper rails because they only infrequently use the project area. However, infrequent use does not automatically signify that impacts will be low. Picacho Reservoir and similar areas may become increasingly important as habitat changes occur in other areas of this species' range. Such impacts must be recognized and analyzed.

Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*)

62

The cactus ferruginous pygmy-owl was listed as endangered under the ESA in 1997, but was delisted in 2006 "for reasons unrelated to recovery."[57] In 2011, the USFWS determined that listing was not warranted, but clearly the species is in imperiled and as such is listed as sensitive by the BLM. Habitat for the cactus ferruginous pygmy-owl is located throughout the project corridor area.

Threats to pygmy-owls include loss habitat including that in riparian areas and the spread of invasive species such as buffelgrass that cause unnaturally hot fires to burn, destroying saguaros and other native vegetation.

[57] Flesch, A.D., and R. J. Steidl. 2006. Population trends and implications for monitoring cactus ferruginous pygmy owls in northern Mexico. Journal of Wildlife Management 70(3):867-871.

1600	Response to Comment
61	Picacho Reservoir, the only site within the Project area where the Yuma Clapper Rail has been recorded, is an overflow reservoir for the San Carlos Irrigation and Drainage District. As such, it only fills when other reservoirs in the system are at or near capacity, and it may remain dry for several years. When full, water in the reservoir is then withdrawn as needed for irrigation. No plans exist to maintain the site as a permanent wetland, and the site is not anticipated to support Yuma Clapper Rails in the future to a greater degree than under current conditions.
62	Comment noted. As stated in the standard mitigation measures, all transplantable saguaros would be salvaged and replanted to minimize impacts to nectar-feeding bats and the Cactus Ferruginous Pygmy-owl.

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Figure 1. Photo courtesy of Jason Rugolo on Tonto National Forest near Rio Verde, Saguaros removed for transmission lines.

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Pygmy-owls are currently found primarily in Sonoran desert scrub vegetation and riparian drainages and woodlands, as well as palo-verde-cacti-mixed scrub

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1600	Response to Comment
	See following page(s)

62

associations.[58] It primarily nests in saguaro cacti cavities, so additional loss of saguaros associated with this project could negatively impact this imperiled species. To improve habitat for this species, it is important to both maintain and restore "woodland vegetation along drainages and tall upland vegetation with saguaros."[59] The BLM should avoid, salvage, and relocate saguaros of transplantable size is important to reduce impacts to pygmy owl habitat. Any activities should also avoid mesquite bosque habitat. The Final EIS must adequately analyze potential cumulative effects upon the owl of energy development that would be enabled by the construction of SunZia.

Because pygmy-owls generally fly short distances a minimal distance above the ground when they seek to cross vegetation openings during natal dispersal and when flying across their home ranges,[60] so consideration should be given to this and creating much wider opening devoid of perching areas should be avoided.

Sandhill crane (*Grus canadensis*)

63

Sandhill cranes are primarily birds of open freshwater wetlands, but the different subspecies utilize habitats that range from bogs, sedge meadows, and fens to open grasslands, pine savannas, and cultivated lands. Sandhill cranes occur at their highest breeding density in habitats that contain open sedge meadows in wetlands that are adjacent to short vegetation in uplands.[61] A portion of three distinct populations of sandhill cranes winters in Arizona. Cranes from both the Rocky Mountain (RM) and mid-Continent (M-C) populations winter in the Sulphur Springs and Gila River valleys of southeastern Arizona.[62]

The BLM must analyze and avoid migratory flyways and important habitats for sandhill cranes to prevent collisions and population-level impacts. Areas of concern for sandhill cranes in the project area include the Rio Grande River corridor, the Willcox Playa, and Crane Lake, located in the northern portion of the Sulphur Springs Valley in southeastern Arizona, which supports the second largest over-wintering concentration of this migratory bird.

The USFWS estimates that 174 million birds die each year as a result of colliding with transmission lines. We recommend avoiding spanning bodies of water or placing lines between heavily-used bodies of water and landscape contexts in which the overhead static wire is obscured or hard to see. Although a limited number of studies have been conducted on the use of markers or "bird diverters" to reduce collisions, BLM should confer with the USFWS to determine and implement best practices for reducing transmission line and guy wire collisions with sandhill cranes and all bird species. We

[58] See U.S. Fish and Wildlife Service species account at http://www.fws.gov/southwest/es/arizona/Documents/Redbook/Cactus%20Ferruginous%20Pygmy%20owl.pdf.
[59] Flesch, A. D., and R. J. Steidl. 2006. Population trends and implications for monitoring cactus ferruginous pygmy-owls in northern Mexico. Journal of Wildlife Management 70:867-871.
[60] Flesch, A. D., and R. J. Steidl. 2007. Association between roadways and cactus ferruginous pygmy owls in northern Sonora Mexico. Final Report to Arizona Department of Transportation, Tucson, Arizona. A.G Contract No. KR02-1957TRN JPA 02-156.
[61] See International Crane Foundation species account at http://www.savingcranes.org/sandhill-crane.html.
[62] See Arizona Game and Fish Department species account at http://www.azgfd.gov/h_f/game_crane.shtml.

1600	Response to Comment
63	All available mitigation measures will be considered to minimize the collision risk for all migratory birds. In addition to siting and engineering options, final selection and placement of bird diverters will be identified in the Avian Protection Plan. APLIC's updated 2012 guidelines for reducing collision risk will support development of the Avian Protection Plan.

63 encourage SunZia to develop an APP and to follow best practices laid out by USFWS,[63] NMDGF,[64] and the APLIC.[65]

64 **Southwestern willow flycatcher** (*Empidonax traillii extimus*)

The endangered southwestern willow flycatcher is found at various locations in the project area, with designated critical habitat along numerous riparian corridors (the species' breeding habitat) in the region. They are threatened by habitat loss, particularly in these riparian areas.

The BLM should consult with the USFWS regarding conservation measures for the southwestern willow flycatcher. Avoidance, minimization, and mitigation measures consistent with the recovery plan (and implemented in consultation with USFWS) may be warranted for any instances in which the transmission corridor crosses a floodplain or other riparian habitat area. Engineering of structures to span over flycatcher habitat is the preferred avoidance method, and vegetation preservation and/or restoration actions should be implemented where SunZia interacts with flycatcher habitat.

65 **Sprague's pipit** (*Anthus spragueii*)

Sprague's pipits could be significantly affected by this project. This species is very sensitive to habitat fragmentation, and it also avoids areas with structures such as those proposed in this project. As the DEIS notes, "Postconstruction restoration in areas of habitat suitable for Sprague's pipit may not be an effective mitigation, since the birds would likely not occupy areas near tall structures" (pg. 4-75).

No mitigation measures are proposed for this species. This project could significantly alter available habitat for this species and represents an unacceptable impact.

66 **Sonoran desert tortoise** (*Gopherus agassizii*)

The Sonoran desert tortoise is a candidate species for listing pursuant to the ESA. The USFWS Federal Register Notice, 12-Month Finding on a Petition To List the Sonoran Population of the Desert Tortoise as Endangered or Threatened, provides a great deal of information on this species. As part of this, USFWS announced a finding for the Sonoran desert tortoise of warranted but precluded by the need to address other higher priorities.[66]

As its common name denotes, it is found in the Sonoran Desert. Sonoran desert tortoises are most closely associated with the Arizona Upland and Lower Colorado River subdivisions of Sonoran desertscrub and Mojave desertscrub vegetation types. They occur most commonly on rocky, steep slopes and bajadas, and in paloverde-mixed

[63] APLIC and USFWS, 2005. (Full reference above.)
[64] NMDGF, 2003. (Full reference above.)
[65] APLIC, 2006. (Full reference above.)
[66] Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to List the Sonoran Population of the Desert Tortoise as Endangered or Threatened; Proposed Rule. Federal Register, Vol. 75, No. 239. 14 December 2010. Pp. 78094-78146.

1600	Response to Comment
64	Section 7 consultations will address effects to the Southwestern Willow Flycatcher, including mitigation measures to prevent adverse effects to designated critical habitat at the Rio Grande crossing location.
65	The DEIS (Section 3.6.6.1) notes that Sprague's Pipits may or may not avoid tall structures in wintering habitat, but adequate information is not available. If tall structures do cause avoidance, siting near existing transmission lines would be the most effective form of mitigation. Much of the BLM preferred alternative within Sprague's Pipit habitat is adjacent to existing transmission lines.
66	BLM's policies regarding Sonoran Desert Tortoise would be followed, as would the Arizona Interagency Desert Tortoise Team "Recommended Standard Mitigation Measures For Projects In Sonoran Desert Tortoise Habitat". Note that raven predation facilitated by transmission lines has not been found to cause increased mortality in juvenile Sonoran Desert Tortoises. Unlike the Mojave Desert, natural perches are readily available, and Sonoran Desert Tortoises use habitat with abundant rock and shrub cover.

66 cacti associations.[67,68] Core, higher density populations of this species tend to be "island like" and associated with steeper terrain and aspects, making the species very vulnerable to connectivity disruptions, especially as associated with the development of roads and other infrastructure. Also, additional perches for ravens can increase the mortality for desert tortoises as ravens use transmission lines as a means to scout out and prey upon young tortoises.[69,70]

67 Sonoran desert tortoises are very susceptible to the construction and maintenance activities related to this project. The BLM proposes some mitigation measures to address this problem, but inadequate information is provided to determine if these measures are suitable. For example, preconstruction surveys will only be useful if conducted just prior to construction by a qualified biologist in order to determine if tortoises are in the path of construction. Even then, tortoises can be extremely difficult to locate, and direct mortality will still occur. Indirect effects, including habitat loss and degradation, increased recreation, and road effects, will greatly increase the impacts to this species.

The BLM must more adequately analyze potential impacts to this species and should consult with the USFWS and AZGFD regarding conservation measures.

Tucson shovel-nosed snake (*Chionactis occipitalis klauberi*)

68 This small, 10–17" shovel-nosed snake is primarily restricted to sand dunes and sandy-silty flats on creosote-mesquite floodplain valley floors, but they can also be found in washes and on rocky hillsides with pockets of sand.[71] The geographic range of this subspecies is currently confined to the most arid areas of Pima and Pinal counties. Tucson shovel-nosed snakes burrow as well as crawl and are adapted for "swimming" rapidly through loose sand. The species is nocturnal/crepuscular, typically staying underground during the heat of the day and foraging for insects above ground at night. Currently an ESA candidate species, Tucson shovel-nosed snakes were found to be "warranted but precluded" in March 2010; the finding states that they are threatened throughout their entire range by habitat loss and fragmentation due to development, roads, potential solar power facilities, agriculture, wildfires, and lack of adequate management and regulation. The USFWS is required to submit a Proposed Rule or a not-warranted finding on this candidate species no later than the end of fiscal year 2014.

The BLM must analyze the impacts of road construction and associated habitat fragmentation resulting from the SunZia project and the possibility of additional

[67] Burge, B.L. 1979. A survey of the present distribution of the desert tortoise, *Gopherus agassizi*, in Arizona. Proceedings of the Desert Tortoise Council Symposium 1979: 27-74.
[68] Burge, B.L. 1980. A survey of the present distribution of the desert tortoise, *Gopherus agassizi*, in Arizona: additional data, 1979. Proceedings of the Desert Tortoise Council Symposium 1980: 36-60.
[69] Boarman, W.I. and W.B. Kristan, 2006. Trends in common raven populations in the Mojave and Sonora deserts: 1968-2004. Draft report to U. S. Fish and Wildlife Service, Ventura CA 93003. Contract No. 814405M055.
Sacramento, CA.
[70] Boarman, W.I. 2002. Reducing Predation by Common Ravens on Desert Tortoises in the Mojave and Colorado Deserts. USGS Western Ecological Research Center. Available online at `http://www.werc.usgs.gov/sandiego/pdfs/RavenMgt.pdf`.
[71] See USFWS species account at
http://www.fws.gov/southwest/es/arizona/Documents/Redbook/Tucson%20Shovelnosed%20Snake%20RB.pdf.

1600	Response to Comment
67	BLM acknowledges that preconstruction surveys would be conducted just prior to construction by qualified biologists, and would consult with USFWS and AZGFD regarding conservation and mitigation.
68	The DEIS (Section 3.6.6.1) acknowledges that the Tucson Shovel-nosed Snake may occur in the Project area, and discusses potential effects. Section 7 consultation will address potential effects to the Tucson Shovel-nosed Snake in additional detail.

68 collection of Tucson shovel-nosed snakes in the Final EIS. In addition, the Final EIS must adequately analyze potential cumulative effects of energy development that would be enabled by the construction of SunZia. SunZia and BLM should consult with the USFWS regarding conservation measures for this imperiled species.

Gila chub (*Gila intermedia*)

69 This endangered minnow species is primarily threatened by habitat degradation on the banks of the streams that they inhabit and from upstream runoff in their watersheds. Limiting watershed impacts (erosion, sedimentation, etc.) from construction and preserving riparian corridors will be essential in avoiding impacts upon this species. The mitigation impacts described in the DEIS do little to adequately address threats to this species.

The BLM should consult with the USFWS regarding conservation measures for the Gila chub. It is crucial that measures to avoid, minimize, and control erosion caused by ground disturbance are implemented and monitored for effectiveness.

70 **Rio Grande silvery minnow** (*Hybognathus amarus*)

Regarding the Rio Grande silvery minnow, the DEIS notes that the project would affect the sole remaining population of this species. No actions should be permitted that could further threaten this last remaining wild population. The DEIS does not suitably discuss potential impacts to this species, nor does it recognize that impacts to this population could jeopardize the species' survival.

71 **Socorro springsnail** (*Pyrgulopsis neomexicana*)

The DEIS acknowledges that very little is known about the Socorro springsnail, including its distribution within the study corridor. The only known location of this species is within 500 feet of one of the project links. The only mitigation measure offered is to span the spring outflow and centering the drainage between structures (Section 4.6.4.5, pg. 4-79).

What about the effects of project roads? Erosion and sedimentation? Increased recreational access? Given the lack of knowledge about this species and its potential distribution, as well as the fact that it has been extirpated from other known localities, it is vitally important to eliminate threats at all known or potential sites where it may occur. This project has the potential to cause population-level impacts that may jeopardize the species.

b. Special-status plant species

72 The DEIS admits that little is known about the distribution of many of the special status plant species that may be affected by this project. For example, the recovery plan for Todsen's pennyroyal (*Hedeoma todsenii*) suggests that populations of the species may occur within the study corridor (pg. 3-101). As another example, the DEIS states that "suitable habitat is ***probably*** present over a wide area within the study corridors" for the Chihuahua scurfpea (Pediomelum pentaphyllum) (pg. 3-101, emphasis added).

1600	Response to Comment
69	The DEIS (Section 3.6.6.1) discusses potential effects to the Gila Chub. The USFWS will only consult on a single action in Section 7 consultation. The BLM preferred alternative does not cross any streams supporting the Gila Chub. If the BLM preferred alternative is modified to include habitat for the species, this change would be reflected in a reinitiation of Section 7 consultation.
70	The potential impacts that may occur at the Rio Grande crossing are not anticipated to affect the Rio Grande Silvery Minnow. Mitigation measures would be employed to prevent sediments from being carried into the Rio Grande. Note that the floodplain throughout the range of the population is heavily farmed and developed and development of the Project would not substantially change existing conditions.
71	Spanning of the stream outflow is anticipated to be an adequate measure to eliminate the risk of effects to hydrology in Socorro Springsnail habitat. However, geotechnical studies would be required prior to construction. If evidence was found that hydrology would be affected, siting of structures would be adjusted. (Note that this link is not a part of the BLM preferred alternative).
72	Potential impacts to each special-status plant species have been assessed to the degree possible with existing information, and will continue to be updated with any new information. None of the species discussed in the comments are known to occur on any alternative, although the presence of potentially suitable habitat is noted as appropriate.

72 In order to better estimate how the project may impact species such as this, thorough studies are needed in order to identify populations. Without this knowledge, impacts cannot be adequately analyzed.

When populations of special status plant species are found, they must also be avoided, which should be made clear in the Final EIS. For example, when discussing the Acuña cactus (*Echinomastus erectocentrus acunensis*), the DEIS states that, "where possible, destruction of plants would be avoided" (pg. 4-80). When and why would this not be possible?

The BLM should consult with the USFWS and state agencies regarding conservation measures for special status plant species found within the study corridor.

c. Appendix B1 – additional special status species

73 Appendix B1 addresses additional special status species that are not listed under the ESA, including those considered sensitive by land management agencies or by New Mexico or Arizona. This list represents hundreds of sensitive species not discussed within the DEIS. Although the appendix provides information about the species and potential threats to those species, it does not discuss how this proposed project may affect those species. This is a serious oversight. Without this information, the BLM cannot determine the full impacts of this project on the affected environment. The BLM must analyze impacts to these species prior to determining whether this project should move forward.

d. Critical habitat

74 Depending on which alternative is selected (and which links within that alternative), the proposed project would affect critical habitat for a variety of species, including, but not limited to, Mexican spotted owl, Southwestern willow flycatcher, Gila chub, Rio Grande silvery minnow, spikedace, and loach minnow. The DEIS does not adequately recognize the importance of these areas and the significance of any effects on them. Critical habitat is "essential for the conservation of a threatened or endangered species."[72] The project may significantly alter portions of critical habitat, thereby potentially affecting the species at the population level. The Final EIS must address impacts to these critically important areas.

e. Mitigation measures

75 As the BLM notes, "impacts of linear features on wildlife are mostly negative and may be difficult to mitigate" (Section 4.6.2.2, pg. 4-59). However, the BLM also frequently notes that, with mitigation measures, effects will be minimal on many species. The DEIS does not contain adequate information to justify this statement. In fact, based on the information provided in the DEIS, as well as the information we discuss above, impacts to many species will be quite significant. More information is needed about the various mitigation measures proposed and the estimated effects on the species discussed in the EIS.

The DEIS frequently mentions that a "posted reasonable construction speed limit could minimize potential collision risk" with a variety of species of concern. What would this posted speed limit be,

[72] U.S. Fish and Wildlife Service. 2002. Critical habitat: what is it? Available online at http://www.fs.fed.us/r9/wildlife/tes/docs/esa_references/critical_habitat.pdf.

1600	Response to Comment
73	Comment noted. All applicable laws, regulations, and policies would be followed to avoid or minimize effects to special-status species.
74	Designated critical habitat for the Southwestern Willow Flycatcher and Rio Grande Silvery Minnow would be crossed by the Project, regardless of alternative. Designated critical habitat for the Gila Chub would be crossed by Subroute 4C3. Potential impacts to these species are discussed in Section 4.6, and will be assessed during Section 7 consultation. No other critical habitat would be crossed by the Project.
75	Mitigation measures have been identified as part of the Project description (Section 2.4.12, Table 2-10) and selective mitigation measures (Table 2-11) which will be required during the design, construction, and/or operation phases of the Project. A mitigation plan will be included in the Final POD, which will include management of construction activities, training, and monitoring.

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and how will it be enforced? Even at low speeds, vehicles and roads have significant impacts on wildlife and can result in high mortality rates due to a variety of factors, including road design, driver awareness, etc.[73,74] Similarly, without strict enforcement, it is highly unlikely that those traveling on the project area would adhere to the speed limit, especially members of the general public who may access the area for recreation, etc. Is there any funding available to ensure enforcement activities? If a suitable speed limit and enforcement plan are not in place, the posted speed limit should not be included as a mitigation effort as it is unlikely to reduce wildlife mortality or injury.

Similarly, the DEIS notes that debris and trash will be properly contained and removed from the project site. Who will oversee this mitigation measure to ensure that no litter is left on-site?

Table 2-10 states that all supervisory construction personnel would be instructed on the protection of cultural and ecological resources (pg. 2-87). Why is this training not required for all construction personnel, rather than just the supervisors? The supervisors cannot oversee every action taken by their staff and will not be able to ensure that personnel do not take inappropriate actions toward these resources. Also, will the person(s) conducting this training be properly trained themselves? Will they have appropriate knowledge of all resources that may be encountered? Will identification of special status species and proper monitoring techniques be part of this training?

The DEIS states that "fences and gates would be repaired or replaced to their original, predisturbed condition" (Table 2-10, pg. 2-88). We encourage the BLM to use this opportunity to modify any fences that are currently not wildlife compatible, as appropriate.[75]

76

Table 2-10 says that preconstruction surveys will be conducted for special status species in areas of known occurrence or suitable habitat. Who will conduct these surveys? It is important for a biologist who is familiar with each species conduct the surveys to ensure that all species/individuals that occupy the area are identified. This may require multiple biologists as many species are very specialized and can be difficult to locate without proper training.

When in relation to the start of construction will these surveys be conducted? Ideally, surveys for special status species should be conducted well in advance of construction so that any populations can be avoided. In fact, because so little is known about the occurrence of many of the species discussed in the DEIS, these surveys should have been completed prior to completion of the DEIS. Without a thorough understanding of what species are present in the project corridor and surrounding area – or where they are located within the project area – effects to these species cannot be adequately assessed.

Surveys should also be conducted immediately preceding construction or use of an area to determine what species are present. These surveys should not be limited to only special status species but should include all plants and animals in order to minimize negative impacts. If an animal or plant is found within the construction path, it should either be moved or avoided, as appropriate, or construction should cease until the animal has moved or other appropriate action has been taken.

[73] Coffin, A.W. 2007. From roadkill to road ecology: a review of the ecological effects of roads. Journal of Transport Geology 15(5): 396-406.
[74] Gunther, K.A., M.J. Biel, and H.L. Robison. 1998. Factors influencing the frequency of road-killed wildlife in Yellowstone National Park. International Conference on Wildlife Ecology and Transportation. Pp. 32-42.
[75] Arizona Game and Fish Department. Wildlife compatible fence. Available online at http://www.azgfd.gov/w_c/documents/110125_AGFD_fencing_guidelines.pdf. Accessed 13 August 2012.

1600	Response to Comment
76	Survey protocols specified by USFWS and BLM will be followed according to the Biological Opinion for the Project.

1600

f. Biological Resource Conservation Areas

77

The proposed project, including all alternatives except the No Action alternative, would have impacts to wildlands, wildlife, and conservation areas in both Arizona and New Mexico. This project would affect 16 conservation areas that are managed for biological resources, as well as several Important Bird Areas. These lands support a wide variety of plant and animal species, including numerous special status species. Many of them are relatively undeveloped and provide increasingly important refuges for the species they support.

The DEIS identifies many, but not all, of these special areas. However, the DEIS significantly downplays the impacts this project will have on these areas and, thus, on the species they support.

For example, Chupadera Mesa, as noted on pg. 3-110, "contains a large area of high-quality, relatively pristine grassland-piñon juniper ecotone in a mostly undisturbed area with little potential for development." As the DEIS states in Section 4.6.3.1, "fragmentation resulting from the addition of new infrastructure to large, currently intact blocks of habitat" represents a significant impact on biological resources (pg. 4-62). Yet, on pg. 4-88, the DEIS indicates that the project would have minimal, if any, impacts to this area. All of the action alternatives would cross this area. The DEIS also fails to adequately evaluate the project's potential impacts on Pima County's Sonoran Desert Conservation Plan Conservation Lands System.

The DEIS analysis and inventory of wild lands and conservation areas, as well as the huge economic investment in conservation areas is inadequate, inaccurate, and incomplete regarding the impacts to these sensitive and important areas. While we appreciate that the both the project proponent and BLM have stated that they seek to minimize such impacts, we think they have missed the mark on this project and, in fact, question how such a major project can cut through these important conservation areas without devaluing both their ecological and economic values. The mitigation offered is inadequate at best.

The proposed SunZia project and related energy development projects will harm these conservation plans and areas and compromise the integrity of the following areas and the surrounding landscapes, as well as others:

- Pima County's Sonoran Desert Conservation Plan Conservation Lands System (Pima County)
- San Pedro River Valley and migration corridor (USFWS proposed National Wildlife Refuge and numerous private land conservation easements)
- Aravaipa Canyon/Galiuro Mountains Complex (USFS, BLM, State, Private)
- Saguaro National Park East (NPS)
- Las Cienegas National Conservation Area (BLM)
- Pima County preserves (Pima County, State of Arizona)
- AZGFD-identified wildlife linkages (Arizona)
- Willcox Playa
- Rio Grande River and migration corridor
- Sevilleta National Wildlife Refuge (USFWS)
- Bosque del Apache National Wildlife Refuge (USFWS)
- Ladder Ranch (owned by Ted Turner)
- Lake Valley Ranch (owned by Jim Winder)

36

1600	Response to Comment
77	A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3. The DEIS discusses where significant impacts may occur (Section 4.6.5), and considers how the Project may affect the function of habitat that is crossed. Some habitat types, including their resident wildlife, are relatively resilient to the type of disturbance caused by transmission lines. Along alternatives on Chupadera Mesa, the dominant vegetation community is a juniper savanna, as noted in the comment and DEIS. This is a relatively patchy community, with patches of trees interspersed with grassland. Although the Project would cause a long, linear edge across that habitat, it would remain within the range of normal conditions present in that habitat. Dense juniper woodland elsewhere on Chupadera Mesa is largely avoided, as are other habitats highly sensitive to fragmentation such as riparian woodlands.

77

- Nutt grasslands complex (BLM, State, Private)
- Peloncillo Mountains Wilderness and wildlife linkage (BLM, State)
- Citizen-proposed wilderness areas (BLM, USFS, State)
  - Padilla Gonzales
  - Stallion Wilderness Study Area and contiguous roadless lands
  - Veranito Wilderness Study Area and contiguous roadless lands
  - Sierra de la Cruz
  - Cibola Canyon
  - Chupadera Wilderness Addition
  - Peñasco Canyon
  - Massacre Peak
  - Magdalena Mountains Units
  - Goodsight Mountains
  - Nutt Mountain
  - Sierra de las Uvas/Robledos
  - Lordsburg Playas
  - Pinaleño Mountains

The above list is not an exhaustive list, but merely highlights some of the areas most affected by the proposed project. As noted elsewhere in our comments, there are also important unfragmented wildland complexes, Outstanding Resource Waters, and other biological resources that are significantly affected and warrant the selection of the No Action alternative.

g. Wildlife linkages and habitat fragmentation

78

"Habitat fragmentation and loss are currently recognized as the principal threats to biodiversity" (Section 3.6.8.1, pg. 3-108). The BLM further reiterates this point by noting that any actions that result in fragmentation would have a significant impact on biological resources. However, although the BLM acknowledges these facts by incorporating these statements into the DEIS, it does not adequately assess potential impacts caused by habitat fragmentation or impacts to wildlife linkages and movements as a result of this project.

The DEIS states that the Arizona Wildlife Linkages Workgroup resulted in the publication of Arizona's Wildlife Linkages Assessment. However, what the BLM does not recognize is that this assessment is by no means complete; rather, it is an evolving document that should be used as a guideline. As the linkages webpage states: "The assessment document and map are the initial efforts to identify potential linkage zones that are important to Arizona's wildlife and natural ecosystems. This is only the first step in a continuing process of defining critical habitat connectivity areas" (emphasis added).[76]

The BLM should more thoroughly discuss effects of this project on wildlife movement in areas both within and outside of the identified linkages. This analysis should cover the effects of the linear fragmentation (from the transmission line and associated roads and other features), the potential effects that may radiate outward (e.g., increased recreation, illegal spur roads, etc.), and the edge effects associated with these. Natural, undeveloped areas are critically important to a variety of species that will be affected by this project; natural, undeveloped corridors between these areas are

[76] Arizona Department of Transportation. 2010. Arizona's wildlife linkages assessment document. Available online at http://www2.azdot.gov/Highways/OES/AZ_WildLife_Linkages/assessment.asp. Accessed 14 August 2012.

1600	Response to Comment
78	The DEIS (Section 4.6.4.7) discusses the Arizona's Wildlife Linkages Assessment to the extent it was complete at the time the DEIS was released. No new information has become available for the FEIS. The BLM is aware that additional planning may occur, but does not speculate on the outcome of that planning. Fragmentation is discussed in the DEIS, and in greater detail in the FEIS (Section 4.6.3.1 and discussions of individual alternatives, Section 4.6.5).Available information from within the study area or similar habitats does not indicate that transmission lines are significant fragmenters, with the exception of some grassland species. The Sprague's Pipit may be sensitive to tall structures in nesting habitat in the northern Great Plains, although this has not been investigated in wintering habitat in the Southwest. Potential indirect effects including recreational traffic are noted in the discussion regarding fragmentation.

78 just as important. For many of these linkages, the DEIS states that development already occurs in the habitat, so this project would not significantly add to fragmentation. However, any source of fragmentation in these areas – whether new development or additive to other development – should be avoided.

h. Perennial versus ephemeral and intermittent waters

79 The DEIS has greatly underestimated the significance of intermittent and ephemeral sections of waterways. Instead, the DEIS primarily focuses on perennially flowing waters when discussing impacts to wildlife species. For example, the discussion of Muleshoe Ranch CMA assumes minimal impacts to this area because the "links would cross just below the reach of perennial waters in each drainage" (pg. 4-82). However, impacts in this area could be quite significant as ephemeral or intermittent water may exist in these drainages.

Ephemeral and intermittent waters can be just as important as perennial waters. In fact, they can often be more important in some areas of the Southwest. Eighty-one percent of streams in the arid and semi-arid Southwest are ephemeral and intermittent streams.[77] They provide "these streams provide landscape hydrologic connections; stream energy dissipation during high-water flows to reduce erosion and improve water quality; surface and subsurface water storage and exchange; ground-water recharge and discharge; sediment transport, storage, and deposition to aid in floodplain maintenance and development; nutrient storage and cycling; wildlife habitat and migration corridors; support for vegetation communities to help stabilize stream banks and provide wildlife services; and water supply and water-quality filtering."[78] Because of their significance, it is recommended that these streams not be looked at individually, but that "[c]onsideration of the cumulative impacts from anthropogenic uses on these streams is critical in watershed-based assessments and land management decisions to maintain overall watershed health and water quality."[79] The Final EIS must address impacts to all water resources, including intermittent and ephemeral streams and the species that rely on them, including fish species such as Apache trout and amphibians such as the Chiricahua leopard frog.

VI. CULTURAL RESOURCES

There are numerous prehistoric and historic cultural resources located along the path of as well as in close proximity to the proposed SunZia Transmission Project. The direct impacts to these resources come primarily from ground disturbance, but there are also many indirect and cumulative impacts as well.

Indirect impacts to cultural resources from the proposed project include erosion and increased sedimentation from construction-related activities.

The fact that this transmission line would open up miles of unfragmented landscape and create a defacto road through many areas will mean increased vandalism and illegal artifact collection resulting from the increased public access to these areas.

[77] Levick, L., J. Fonseca, D. Goodrich, M. Hernandez, D. Semmens, J. Stromberg, R. Leidy, M. Scianni, D. P. Guertin, M. Tluczek, and W. Kepner. 2008. The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest. U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046, 116 pp.
[78] ibid
[79] ibid

1600	Response to Comment
79	The DEIS takes into account the conditions at the location of all major ephemeral stream crossings. Typically, ephemeral streams that would temporarily support aquatic species, or facilitate aquatic species dispersal, would be spanned unless existing crossings are present and adequate. See also response to comment 45. No Apache Trout or Chiricahua Leopard Frogs would be present at any stream crossing in the Project area, unless carried downstream from known locations by strong floods. No suitable habitat for either species is present downstream from any crossing location.

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80 According to the Center for Desert Archaeology (CDA) and the National Trust for Historic Preservation (National Trust)[80]:

> . . . the most sensitive locations for cultural resources within the proposed project area in Arizona occur in the foothills of the Pinaleño Mountains, upper Aravaipa Creek, the lower San Pedro River valley and the Picacho Mountains, all of which are crossed by proposed or alternate routes." Clearly, the preferred alternative as well as the alternatives, particularly the Aravaipa and both San Pedro routes will have enormous negative impacts on the significant cultural resources in these areas. It is a further reason for the BLM to select the No Action Alternative and to instead evaluate the use of existing transmission and transportation corridors and seek to meet transmission needs with less harmful projects.

CDA and the National Trust indicate that the ". . . proposed route from the future Willow substation to the existing 500kV line in eastern Pinal County that traverses the Safford Basin, Aravaipa Valley and lower San Pedro Valley is of particular concern." Preservation of this intact cultural landscape provides for important interpretation of sites as part of a larger context rather than in isolation as this area includes relatively intact records of 12,000 years of human activities, including both Native American and Euro-American. This is unique as it is no longer possible to look at this context in other areas where urban development has destroyed or at least impaired the archaeological records.

CDA and other researchers have identified over 500 archaeological sites in the lower San Pedro Valley alone with approximately one-third of them containing architecture and probable human remains. A minimum of 40 sites include villages that were inhabited for a century or more and include houses, ballcourts, and large burial areas, as well as a multitude of other structures and archaeological deposits.

Another important area that is potentially affected by the route is the foothills of the Pinaleño Mountains. This area contains important Hohokam, Mogollon, and Mimbres prehistoric sites, none of which have been adequately studied or evaluated. These sites are significant to both the Hopi and Zuni people and both have ancestral ties to the area. Some of these sites have been vandalized already, but still have important information to provide and value to native peoples. A transmission line in this area would also likely exacerbate the vandalism.

VII. VISUAL RESOURCES, GEOLOGIC, LAND USE AND RECREATION RESOURCES

81 Reading the DEIS with respect to visual impacts, one is confronted with tables, classifications, and labels. For example, "Class A scenery typically has a higher degree of landscape relief, diversity of water, and vegetation, which harmoniously combine and result in a high level of aesthetic appeal" (pg 3-176).

The transformation of a living, vibrant landscape into a classification with a possibility (or not) of being subject to mitigation is indeed breathtaking. The descriptions of the different classes, while comprehensible, seem meant to distance the reader rather than engage him or her.

82 Mitigation is discussed only minimally. For example, the DEIS (pg. 4-27) states the following:

[80] See Center for Desert Archaeology and the National Trust for Historic Preservation's scoping comments, submitted 27 August 2009.

39

1600	Response to Comment
80	Projects such as this, and mitigation in the form of archaeological excavation, allow for the opportunity to intensively study the remains of past cultures, thereby benefitting the public with expanded scientific knowledge. Access is a concern and standard mitigation measures have been developed to address access, such as the use of locked gates and blocking roads that are not necessary for regular maintenance.
81	The visual resource assessment methodology was based on the BLM VRM System (Manual 8400) and includes the inventory of scenic quality which is characterized by landscape units and rating classifications. The visual resource impacts disclosed in the DEIS follow BLM approved methodology and direction given by BLM Visual Resource Specialists. The BLM methodology is the nationally accepted standard for assessing visual contrast for projects like SunZia (Section 4.9.2)
82	Comment noted. Mitigation measures suggested in the text excerpt provided will be verified and mapped based on final engineering for the final POD. The purpose of the POD is to identify necessary construction actions and required mitigation measures to ensure the protection of sensitive resources identified in the DEIS to the extent practicable. Impacts to soils were addressed in the DEIS (Section 4.3.3).

82 Based upon site-specific travel planning and NEPA analysis, the respective agency would determine which roads on public lands would remain open, restricted, or closed to the public (SE 4) or gated (SE 6), using the most effective and least environmentally damaging methods appropriate, where feasible. These mutually exclusive measures would minimize traffic across minimally or previously undisturbed landscapes, which would limit the exposure of soils susceptible to water or wind erosion. A detailed Project reclamation plan would be developed to mitigate site-specific resource impacts (SE 5), which would aid in returning the land surface to a state close to its original condition; thereby limiting the exposure of soils susceptible to water or wind erosion, and the irreversible conversion of designated Prime or Unique Farmland soils to nonagricultural uses."

83 This does not factor in the unique soils found on the desert. These soils take decades to recover from even the most casual use. Off-road vehicle tracks from recreationists doing figure eights on pristine desert surfaces can be seen decades later. For example, numerous complaints have been filed about Border Patrol's off-road activity and its impacts to the fragile borderland deserts.[81] Should this project be constructed, the soils near the towers will be significantly and negatively affected, creating a scar on the landscape, independent of the structure itself.

According to the Arizona-Sonora Desert Museum, "Darkly-varnished desert pavements take so long to form and are extremely sensitive to disturbance. The intaglios created by ancient peoples can last for centuries. So will the uninspiring and less aesthetically appealing tracks so thoughtlessly created in our time by drivers of off-road vehicles."[82]

It goes on to say, "Like desert pavements, these living crusts can easily be destroyed by human activities. Mechanical disturbance by recreational vehicles poses a significant threat in all desert regions of the American Southwest.... Once destroyed, recovery of some kinds of microphytic crusts can be very slow, taking decades to perhaps a century or more."[83]

84 Towers built near the riparian areas would not have the same problem as they would with the desert soils; however, the towers themselves would have a significant visual impact that could not be mitigated, to say nothing of the anticipated deforestation in the areas to diminish fire risk from arcing. Riparian areas, as noted in the DEIS are particularly sensitive – these areas are rare for the desert dweller and are particularly precious. See for example, page 4-52 where it says, "Removal of unique riparian habitat, increased sedimentation, and reduced water quality are among the primary adverse environmental effects on surface water resources that could be associated with the proposed Project. The primary adverse environmental effect to groundwater resources would be potential degradation caused by construction and operation activities and the presence of permanent facilities."

There is a huge difference between scenery destruction as seen through the prism of the DEIS and through residents and visitors to the desert. For example, Mr. Peter Edgell wrote, "On a Sunday morning in 1974 my wife and I were awakened by the sound of a helicopter across the San Pedro River from us. We walked outside and saw to our horror this helicopter was raising a behemoth electrical tower and more were lying in wait to be raised. We had bought our ten acres because of the beautiful views of hills and mountains on all sides of us. Now, almost 40 years later those towers are still upsetting. Several

[81] Environmental Assessment for the Proposed Ajo Forward Operating Base, Ajo Station Area of Responsibility, U.S. Border Patrol, Tucson Sector, September 2011, Appendix B Comment Response Matrix.
[82] McAuliffe, J.R. Desert soils. Arizona-Sonora Desert Museum. Available online at http://www.desertmuseum.org/books/nhsd_desert_soils.php.
[83] *Id.*

1600	Response to Comment
83	A discussion of desert pavement and biological soil crusts has been added to Chapters 3 and 4 of the FEIS. This discussion includes where these resources could potentially occur within the Project area and measures to be implemented to mitigate potential impacts.
84	Selective mitigation will be applied to all riparian crossings to reduce visual impacts to the extent practicable. Although the towers will still be visible, measures to reduce the duration of the view will be implemented. All crossings will be crossed perpendicularly and tower spans will be maximized to off-set the tower placement from the edge of the river. Maximizing the span may also reduce the need to remove riparian vegetation if the tower can be placed outside of this zone or in a location where the vegetation is less dense or already disturbed. Section 2.4.12, Table 2-11.

84 years ago I found I photo taken in 1973 of those hills. They had been so beautiful before the towers were there."[84]

Mr. Edgell and his wife will be treated to more towers should the Western San Pedro SunZia route be selected.

The following image shows how easily seen the large towers will be in the San Pedro Valley. The red line depicts the large transmission towers.

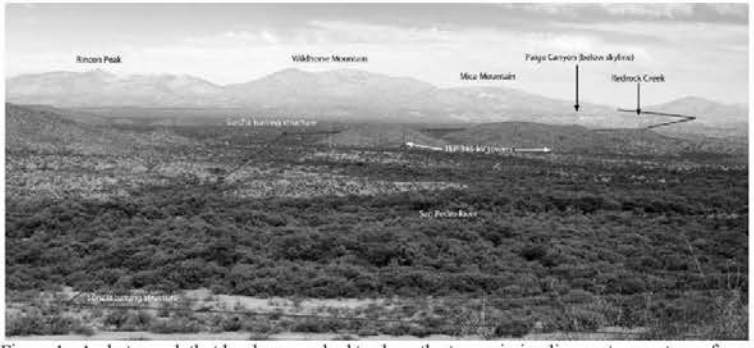

Figure 1. A photograph that has been marked to show the transmission line route, courtesy of Norman Meader.

85 A movie set company in the valley, which brings in an amount of money in excess of one million dollars into the local economy annually, expects to go out of business if the San Pedro route is chosen due to the visual impacts.[85] Similarly, visitors to Aravaipa or the nearby mountains will not be pleased with the views to come should that route be selected. It would be fatuous to assume that an equal if not stronger argument could not be made against the destruction for that route.

The ugly scar of erosion is also a serious concern. Desert soils are also particularly prone to erosion. The following image shows erosion caused by the cutting of a road in the San Pedro Valley many years ago. Such conditions continue to get worse.

[84] Original comments at a public meeting, then by private communication with Elna Otter, August 2012.
[85] Jack and Joanne Gammons, owners of Gammons Gulch Movie Set and Museum comments at a meeting of the Community Watershed Alliance held in Benson, Arizona on July 24, 2012. A copy of their comments to BLM can be found at http://www.cascabelworkinggroup.org/RESgammons.html.

1600	Response to Comment
85	Comment noted

1600

Figure 2. A photograph depicting the visual scar of erosion caused by a road, courtesy of Alex Binford.

86 While the ecological impacts of these proposed transmission lines are of greatest concern, the visual impacts will be extensive and unmitigable, including the significant degradation in views from designated natural areas, additional light pollution, and the erosion.

Subroute 4C2c would have high to moderate impacts on Class B scenery and moderate to low impacts on Class C scenery. There would be some high impacts to residential, recreational, and travel viewsheds. Mitigation for these effects is not adequately addressed in the DEIS. This subroute also passes through vulnerable soils in the San Pedro River Valley.

VIII. SPECIAL DESIGNATIONS AND WILDERNESS

87 The BLM has a responsibility under FLPMA to inventory and consider lands with wilderness characteristics during the land use planning process.[86] Instructional Memorandum (IM) 2011-154 and Manuals 6310 and 6320 contain mandatory guidance on implementing that requirement. The IM directs BLM to "conduct and maintain inventories regarding the presence or absence of wilderness characteristics, and to consider identified lands with wilderness characteristics in land use plans and when analyzing projects under [NEPA]."

[86] See *Oregon Natural Desert Ass'n v. BLM*, 531 F.3d 1114, 1119 (9th Cir. 2008).

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1600	Response to Comment
86	High impacts to viewers including residences, recreation users, and travel route users are anticipated to occur along the preferred route. The majority of these high impacts are anticipated for viewers within the immediate foreground distance zone (within ½ mile). BMPs or standard mitigation measures would be implemented where appropriate to reduce visual impacts (see Table 2-11), although impacts within the foreground would remain in most conditions.
87	Comment noted. Please see text change response to comment #12.

87 Under NEPA, BLM must update its inventory of lands with wilderness characteristics along the potential SunZia routes and cannot simply rely on the underlying Resource Management Plans (RMPs) along the potential routes. See *N. Plains Res. Council v. Surface Transp. Bd.*, 668 F.3d 1067, 1085-87 (9th Cir., 2011) (rejecting agency's reliance on "stale" inventory data as violating NEPA's "hard look" requirement). Manual 6310 identifies situations in which BLM must update its inventory, including when: "BLM has new information concerning resource conditions, including public or citizens' wilderness proposals" and when a "project that may impact wilderness characteristics is undergoing NEPA analysis."

88 Lands with wilderness characteristics, including Citizen Proposed Wilderness areas and Wilderness Study Areas (WSAs) should be protected by the BLM and must be considered when evaluating changes to the RMPs. Citizen Proposed Wilderness lands have been inventoried by various groups and have wilderness qualities including naturalness, solitude, and opportunities for primitive and quiet recreation. The lands provide important wildlife habitat and the sensitive nature of these lands and their resources and values makes transmission development inappropriate there. Habitat fragmentation is now widely accepted as one of the leading causes of species endangerment and extinction. Therefore, maintaining the integrity of roadless areas and roadless area complexes is crucial to preserving the integrity and security of wildlife habitat. For this reason, new transmission corridors and associated access roads should follow existing disturbance corridors and avoid traversing currently roadless areas.

IX. SOCIAL AND ECONOMIC CONDITIONS

The BLM economic analysis in the DEIS is incomplete and inaccurate. It does not consider the impacts on the significant investments in areas that would be affected by the proposed project. Most of the economic benefits would be short-term and associated with construction of the transmission lines, while the negative economic impacts would be long-term and irreversible and unmitigable.

a. Ecotourism

Many of the areas most significantly affected by this proposed project – the San Pedro River and its tributaries, the Aravaipa Creek area, Sulphur Springs Valley and the Willcox Playa – are well-known ecotourism attractions. Birders, hikers, and wildlife watchers come from all over the United States and the world to enjoy this region. Birders are particularly drawn to these areas due to the amazing diversity of birds that inhabit and migrate through these ecologically significant lands. Willcox hosts an annual "Wings Over Willcox" event that focuses on the birding in the area.[87] In 2013, it will be celebrating the 20th anniversary of this event, an important component of the local economy.

89 The DEIS fails to analyze the impact of the proposed project on ecotourism including direct, indirect, and cumulative impacts. The DEIS underestimates and fails to adequately analyze the economic role of public lands, river valleys, playas, and natural open space, plus the wildlife these support for the local communities and it ignores existing research documenting the economic importance of protected public land resources. Income from tourism is a sustainable source of income, but requires that the resource is managed and protected. The proposed SunZia transmission line has the potential to forever damage sustainable regional resources for a questionable purpose and need.

[87] See Wings over Willcox Birding and Nature Festival webpage at http://www.wingsoverwillcox.com. Accessed 19 August 2012.

1600	Response to Comment
88	Comment noted. Please see text change response to comment #12.
89	The economic role of public lands is acknowledged in the DEIS, As stated in Section 4.13.4.5 "impacts (direct and indirect) to recreation and tourism have been identified by the public during the scoping process. The description of land use impacts to recreation areas or trails resulting from Project construction or operation have been described in Section 4.10.5 and visual impacts to recreation users have been described in Section 4.9.3. The Project would not substantially change the use of recreation areas or trails, and the number or type of recreation users would not be likely to change, therefore economic effects to recreation are not anticipated. Changes in the tourist economy would therefore not be expected." It is acknowledged that there are many ecotourism attractions throughout the study area, although it is noted that the BLM Preferred Alternative would not cross Aravaipa Creek, and would not affect the Wilcox Playa area or any of the crane watching sites identified on the Wings Over Wilcox festival map. Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area.

b. Watchable wildlife

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Watchable Wildlife programs play an increasing role with state wildlife agencies and land managers. As other forms of wildlife recreation continue to decline, watchable wildlife programs are more popular than ever.[88] In Arizona, the Arizona Game and Fish Department is seeking to "Identify, assess, develop and promote watchable wildlife recreational opportunities."[89] In a 2006 study, the Outdoor Industry Foundation reported that all outdoor wildlife-related recreational activities generated $730 billion annually for the United States economy and, of that, watchable wildlife generated $43 billion annually.[90] They reported 66 million Americans participated in wildlife viewing, which supported 466,000 jobs. Estimated economic returns included retail sales averaging $8.8 billion, trip related expenditures of $8.5 billion, and state and federal tax receipts of $2.7 billion. There are some aspects of outdoor recreation not captured by these numbers as well, including visitors who come for sight-seeing, family gatherings, and for educational benefits.

A 2011 study by the National Fish and Wildlife Foundation estimated the combined value of outdoor recreation, nature conservation and historic preservation at creating more than 9.4 million jobs, generating $107 billion in local, state, and federal tax revenues resulting in a minimum total economic impact nationally of $1.6 trillion.[91] The U.S. Fish and Wildlife Service contributed about $4.2 billion in economic activity and supported over 32,000 jobs through its management of 553 National Wildlife Refuges and thousands of smaller natural areas throughout the country.

According to a 2004 study of National Wildlife Refuges, there were 36.7 million visitors who generated $1.64 billion of economic activity in regional economies. About two-thirds of the total expenditures were generated by non-consumptive activities, meaning it was neither fishing (27 percent) nor hunting (5 percent). The authors of this study also conducted willingness-to-pay research to determine the value of these refuges beyond what it actually cost to visit. They found that visitors showed a consumer surplus of more than $1.3 billion, with $816 million of this amount attributed to non-consumptive visitation.

X. IMPACTS OF ROADS

The DEIS greatly downplays the impacts that access roads can have on resources. Roads pose significant threats to the land and resources, including impacts on wildlife through direct and indirect mortality and habitat fragmentation.[92,93,94] In addition to creating new roads in already disturbed areas, many of the

[88] Caudill, J., and E. Henderson. 2005. Banking on nature 2004: the economic benefits to local communities of National Wildlife Refuge visitation. U.S. Fish and Wildlife Service. Available online at https://www.fws.gov/refuges/about/pdfs/BankingOnNature_2004_finalt.pdf.
[89] Arizona Game and Fish Department. 2007. Wildlife 2012: The Arizona Game and Fish Department's Strategic Plan for the Years 2007-2012. Available online at http://www.azgfd.gov/inside_azgfd/documents/Wildlife2012forWeb.pdf.
[90] Outdoor Industry Foundation. The active outdoor recreation economy: a $730 billion annual contribution to the U.S. economy. Available online at http://www.outdoorindustryfoundation.org.
[91] Southwick Associates. 2011. The economics associated with outdoor recreation, natural resources conservation and historic preservation in the United States. Prepared for The National Fish and Wildlife Foundation. Available online at http://www.nfwf.org/Content/ContentFolders/NationalFishandWildlifeFoundation/HomePage/ConservationSpotlights/TheEconomicValueofOutdoorRecreation.pdf.
[92] Forman, R.T.T. 2000. Estimate of the area affected ecologically by the road system in the United States. Conservation Biology 14(1): 31-35.
[93] Theobald, D.M., J.R. Miller, and N.T. Hobbs. 1997. Estimating the cumulative effects of development on wildlife habitat. Landscape and Urban Planning 39(1): 25-36.

1600	Response to Comment
90	Comment noted

subroutes would cross currently roadless areas. We are strongly opposed to construction of roads in these areas.

91 Roads inflict a horrific toll on wildlife, with an estimated one million vertebrates killed daily on America's highways.[95] Roads, paved or primitive, facilitate inadvertent or deliberate disruption of wildlife. According to prominent conservation biologists, habitat fragmentation is the most serious threat to biological diversity and is the primary cause of the present extinction crisis."[96,97]

92 Roads fragment habitat by carving otherwise large patches into smaller ones resulting in negative impacts to interior habitat.[98,99] Roads also directly eliminate wildlife habitat by occupying space within the ecosystem and by altering adjacent habitat.[100,101] Roadside habitats experience increased temperature extremes and solar input and pollution from exhaust, herbicides, garbage, dust, and noise.[102] These conditions increase habitat disturbance by a minimum of 500-600 meters on either side of a small rural road and a much larger distance for highways.[103]

93 Wildlife is affected directly and indirectly by roads. Mule deer frequently harassed by all-terrain vehicles (ATVs) may alter their feeding and spatial-use patterns, and produce fewer offspring the following year.[104] Mountain lions avoid improved dirt and hard-surfaced roads and select home range areas with lower densities of these road types.[105]

94 In the Southwest, roads and associated activities are the primary cause of extensive arroyo cutting during this century.[106] Severe gully formation negatively affects soils, vegetation, and archaeological resources. Vehicular traffic directly destroys biological resources by crushing vegetation and microbiotic crusts. The resulting soil compaction retards the recovery of vegetation. In addition, off-road vehicle (ORV) use can cause unsustainable erosion rates, exacerbate the spread of non-native invasive plants, cause user conflicts, and damage cultural sites.[107]

[94] Trombulak and Frissell, 2000. (Full reference above.)
[95] Watson, M.L. (compiler). 2005. Habitat Fragmentation and the Effects of Roads on Wildlife Habitat. Updated 3/3/05. New Mexico Department of Game and Fish.
[96] Wilcox, B. A., and D.D. Murphy. 1985. Conservation Strategy: The Effects of Fragmentation on Extinction. American Naturalist 125: 879-887.
[97] Meffe, G.K., and C.R. Carroll. 1997. Principles of Conservation Biology. Sunderland, Massachusetts: Sinauer Associates.
[98] Trumbulak, S.C., and C.A. Frissell. 2000. Review of Ecological Effects of Roads on Terrestrial and Aquatic Communities. Conservation Biology 14(1):18-26.
[99] Reed, R..A., J. Johnson-Barnard, and W.L. Baker. 1996. Contribution of Roads to Forest Fragmentation in the Rocky Mountains. Conservation Biology 10(4):1098-1106.
[100] Schonewald-Cox, C., and M. Buechner. 1992. Park Protection and Public Roads. In P. L. Fiedler and S. K. Jain, eds., Conservation Biology: the Theory and Practice of Nature Conservation, Preservation and Management. New York, NY: Chapman Hall, Pp. 373-395.
[101] Soulé, M.E. 2000. Forget About Building the Road to Nowhere. Christian Science Monitor. Available online at http://www.csmonitor.com/2000/1016/p9s2.html.
[102] Yahner, R. H. 1988. Changes in Wildlife Communities Near Edges. Conservation Biology 2(4): 333-339.
[103] VanDerZande, A. N., W.J. TerKeurs, and W.J. VanDerWeijden. 1980. The Impact of Roads on the Densities of Four Bird Species in an Open Field Habitat- Evidence of a Long-distance Effect." Biological Conservation 18: 299-321.
[104] Yarmaloy, C.M. Bayer, and V. Geist. 1988. Behavior Responses and Reproduction of Mule Deer, *Odocoileus hemionus*, Does Following Experimental Harassment with an All-terrain Vehicle. Canadian Field Naturalist 102:425-429.
[105] Van Dyke, F.B., R.H. Broke, H.G. Shaw, B.N Ackerman, T.P. Hemker, and F.G. Lindzey. 1986. Reactions of Mountain Lions to Logging and Human Activity. Journal of Wildlife Management 50:95-102.
[106] Bahre, C. J. 1991. A legacy of change: historic human impact on vegetation of the Arizona Borderlands, University of Arizona Press, Tucson, AZ.
[107] Forest Service. 2000. Forest Service Roadless Conservation: Final Environmental Impact Statement. Vol. 1. Washington, D.C.: Government Printing Office. Available online at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5057895.pdf.

1600	Response to Comment
91	Comment noted. Although the presence of a road without traffic does carry its own effects, the level of use of a given road also affects the degree of impacts. Closure of access roads to recreational traffic or permanent road closure and rehabilitation would be implemented in sensitive locations, to be identified in the POD.
92	See comment 91.
93	See comment 91.
94	See comment 91.

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95 Some measures to mitigate the effects of temporary and permanent roads will be incorporated, but these measures are not adequately discussed, nor are they likely to sufficiently reduce the threats to the resources. Adequate information is not provided in the DEIS to determine if the mitigation efforts that are identified will be suitable. For example, the DEIS states that "upon completion of construction activities, temporary access roads would be reclaimed according to the procedures specified in the Final POD" (Section 2.4.10.1, pg. 2-70). No further indication is provided as to what the reclamation procedures would entail, so we cannot determine if they will adequately address this threat. Similarly, the DEIS mentions that a Project Noxious Weed Management plan will be developed, but no parameters or timetables are specified. This is pertinent information that should be included in the DEIS so that the public can provide substantive comments.

96 Increased recreation as a result of the new or improved access roads is identified as a potential threat. For example Subroute 3A would be located near the BLM Hot Well Dunes Recreation Area, and "construction access for the transmission lines could increase the potential for *unmanageable* off-road access" (Section 2.5.4.2, pg. 2-103, emphasis added). This represents a very significant threat. However, this threat and potential mitigation efforts are not discussed in detail. Instead, the DEIS focuses primarily on the threat from construction traffic and project vehicles. Similarly, the DEIS identifies that recreationists may create illegal spurs from approved project roads, but the threats that these spurs pose are not analyzed or discussed, nor are suitable mitigation measures provided.

97 The only mitigation measure that is provided is closing some of the roads once construction is completed and if the roads are no longer needed. However, how will these roads be monitored during the construction phase to ensure that the public is not negatively affecting resources? How long after construction will the roads be closed? The longer these roads remain open, the more potential there is for abuse by recreationists. How will roads that remain open (some of which will be gated) be monitored to ensure that the public is not overusing them, creating illegal spurs, or tampering with the closure? The DEIS also notes that road closure may not be possible in all areas (pg. 4-99). Where would road closure not be feasible?

98 Section 2.4.10.1 (pg. 2-70) states that overland road construction methods – either overland drive and crush or overland cut and clear – may be implemented where feasible in order to reduce the severity of disturbance. However, the impacts of these methods are not discussed in the DEIS. While such methods may have less of an impact on some resources, they can have significant impact on other resources. Will the areas to be used for overland road construction be thoroughly surveyed for special status species and other important resources? If not, it is highly likely that the potential for direct mortality or injury of these species will increase. Drivers traveling cross-country may not be able to see what lies in their path as easily as they could on a maintained road. It is highly likely that cross-country travel would increase wildlife-vehicle collisions as the animals (and their burrows, if the species resides underground) would not be as noticeable as they would on a cleared road. Related to this, what cross-country speed limit will be imposed, and how will this be enforced? Lower speeds must be required for cross-country travel. Finally, how will areas that are used for overland road construction methods be monitored and reclaimed? These methods are likely to result in more illegal road spurs used by the public as recreationists may see where other vehicles have traveled off-road and will follow suit.

99 Table 2-10, which identifies standard mitigation measures, states that "all vehicle movement outside the right-of-way would *typically* be restricted to designated access, contractor acquired access, or public

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1600	Response to Comment
95	Upon selection of a final route and availability of detailed engineering information, a final POD will be developed. As part of this document, a Noxious Weed Management Plan will outline prevention, control, and management measures specific to the noxious weeds identified along the ROW. Also a detailed reclamation plan will outline specific restoration measures that will be implemented.
96	Comment noted. To be addressed in the final POD. The extent or probability of unwanted OHV use on the ROW is difficult to predict and quantify in an analysis. The BLM has concern for unwanted OHV use in specific areas where access is currently limited.
97	Comment noted. To be addressed in the final POD.
98	Comment noted. To be addressed in the final POD. Upon selection of a final route and detailed engineering, resource surveys will be conducted to determine the location of sensitive species, invasive plants, cultural resource sites, and other resource data. This information will be provided in detailed POD mapping of the ROW. A travel management plan is also included in the POD.
99	Comment noted. The POD allows for some flexibility for variance that may be necessary due to unforeseen circumstances during construction. Movement of vehicles would be restricted to identified travel routes outside the ROW to ensure construction traffic is retained to these routes. Typically these routes are fully improved and can accommodate the needs of construction trucks, equipment, etc. to and from their destination.

99 roads" (pg. 2-85, emphasis added). What is meant by "typically"? When and why would vehicle movement not be restricted? What are potential impacts of movement outside of these designated access areas or roads?

XI. CUMULATIVE EFFECTS

The National Environmental Policy Act (NEPA) requires the BLM to consider the impacts, including the cumulative impacts associated with the proposed SunZia project. *See* 40 C.F.R. § 1508.25. A cumulative impact is defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." *Id.* at § 1508.7. "The point [of a cumulative impacts analysis] is that a large overview should be maintained toward the magnitude of environmental effects, both of the immediately contemplated action and of future actions for which the proposed action may serve as a precedent or have a cumulatively significant impact."[108]

100 A comprehensive cumulative impacts analysis is essential to inform the proper siting, design and operation of transmission projects. The Final EIS for this project should fully evaluate the potential cumulative impacts of all current, proposed, and reasonably foreseeable projects that would affect the lands and resources traversed by and in close proximity to the line. The DEIS is deficient in that it fails to adequately address the cumulative impacts. If the line is built, it is likely to lead to increased development around it. This would be harmful to many of the sensitive ecological and cultural areas in close proximity to the line. Without critical analysis of the need for this project and avoidance of irreversible impacts to unique ecosystems, moving forward with SunZia would set an extremely bad precedent for renewable energy development.

101 The DEIS fails to adequately address cumulative impacts from wind farms, utility-scale solar, natural gas, and other energy development that SunZia would facilitate. These include cumulative impacts to special status species and their habitats, cultural resources, air quality, water quality, and. Activities and designations include, but are not limited to, the Bowie Power Station, a 1,000 megawatt electric generation facility planned for southeastern Arizona near the community of Bowie in Cochise County; the BLM-proposed Afton Solar Energy Zone (BLM Solar Final PEIS); the National Renewable Energy Laboratory (NREL)-identified Western Renewable Energy Zone Qualified Resource Areas (produced by Black & Veatch under subcontract with NREL for the Western Governors Association)[109]; and BLM-proposed Renewable Energy Development Areas (preferred alternative) in the DEIS for the Arizona BLM's Restoration Design Energy Project (RDEP).

102 The proposed Southline Transmission Project, a 345-kilovolt (kV) and 230-kV high voltage electric transmission line and substations was not considered in the DEIS cumulative impacts analysis. The proposed routes for Southline are in close proximity to SunZia's proposed alternatives between Willcox, Arizona and Deming, New Mexico. Therefore, this region in particular deserves detailed cumulative impacts analysis for both of the proposed transmission projects, to include biological (e.g. habitat fragmentation, disturbance, avian impacts, etc.) and cultural resource impacts. The cumulative impacts map in the DEIS (Figure 4-1, 4-249) only delineates the southern proposed route of Southline; however,

[108] *Natural Resources Defense Council v. Callaway*, 524 F.2d 79, 88-89 (2d. Cir 1975).
[109] NREL Western Renewable Energy Zones, Phase 1: QRA Identification Technical Report. Available online at http://www.nrel.gov/docs/fy10osti/46877.pdf.

1600	Response to Comment
100	The cumulative impact analysis in Section 4.17 fully evaluates potential cumulative impacts associated with development that was identified in the Past, Present and Reasonably Foreseeable Future. It is acknowledged that development of energy resources that could interconnect with the Project may occur within proximity to the proposed substations, as described in the energy development scenarios.
101	Please see response to Comment No. 100. Reasonably foreseeable future energy developments have been identified in Table 4-30 of the FEIS, which includes the Bowie Power Station, the Afton Solar Energy Zone, and the NREL identified QRA's. The FEIS has been updated to include recent changes in the Solar PEIS and RDEP in Section 4.17.3 of the FEIS.
102	Updated information regarding the Southline Transmission Project has added to the FEIS in Section 4.17.3 of the FEIS

102 during scoping for this project, a northern route, parallel to I-10 and much closer to SunZia's proposed routes is being evaluated. The Final EIS needs to take this new information into consideration in its cumulative impacts analysis.

103 As the DEIS notes, a cumulative impact is the impact that results from the incremental impact of an action when added to other past, present, and reasonably foreseeable actions. Such actions can be minor on their own but, when added to the other actions, can be significant. Even though the BLM acknowledges this definition, it does not consider the collective impacts of this project as well as past, present, and future actions in the region, nor does it consider all actions that have or may occur in these areas.

104 The cumulative impacts analysis only considered a subset of actions that have or may occur in the area. As noted in Section 4.17.2 (pg. 4-244), the analysis only included "linear projects such as roads, transmission lines, and pipelines; and large area developments such as military installations, planned area developments, substations, conventional and fossil-fueled power plants, and renewable energy developments." It also only includes actions that are "similar in kind and effect as the proposed action, or have considerable impact to environmental resources to which the proposed action's effects will cumulatively contribute." (pg. 4-244). Smaller development projects and other actions, such as groundwater pumping, recreational use, etc., were not included. Even though some of these projects and actions may have relatively small effects on their own, collectively, all such actions can have a significant impact, especially in light of the potential effects of this project. The BLM must include a thorough analysis of all proposed projects and actions in this area.

105 Related to this, the BLM does not provide any consideration to other stressors, such as climate change and drought. As the U.S. Forest Service discusses in detail, "the issues of global climate change and cumulative impacts are closely related."[110] Such stressors are reasonably foreseeable and may have very significant impacts on the resources discussed in the DEIS. By not incorporating factors such as climate change into the cumulative impacts analysis, the BLM has significantly underestimated the impacts of this project.

106 The BLM also significantly underestimates cumulative impacts by not including future projects that are currently speculative or for which details are unknown (pg. 4-246) and by reducing the impact timeframe to 10 years, even though the project duration is expected to be 50 years (pg. 4-246–4-247). This short timeframe may be suitable for updating plans, as the DEIS notes, but it should not be used for determining if a project with such long-reaching effects should move forward. Exclusion of analyses of projects such as the Southline Transmission Project, which is reasonably foreseeable and could have significant impacts on the resources discussed in this DEIS, is unacceptable. In order to adequately assess cumulative impacts, the BLM must incorporate all projects that may occur throughout the duration of this project.

107 Direct and indirect impacts to lands with wilderness characteristics and values was not adequately evaluated in the DEIS. These include the potential of SunZia foreclosing future wilderness designations. The potential for SunZia to open up currently roadless areas (i.e. areas with wilderness characteristics) to additional road creation (both legal and illegal) and other human developments that are contrary to wilderness designation and management must be considered.

[110] Reid, L., and T. Lisle. 2008. Cumulative effects and climate change. U.S. Department of Agriculture, Forest Service. Available online at http://www.fs.fed.us/ccrc/topics/cumulative-effects.shtml. Accessed 14 August 2012.

1600	Response to Comment
103	See response to Comment No. 100.
104	It is acknowledged that there are numerous small projects that could contribute to larger collective impacts, although it is not possible to identify these individual projects. However, the Energy Development Scenario is an analytical tool that provides a means to assess impacts to resources from otherwise unknown energy development projects that could cumulatively contribute to significant impacts. This method of analysis provides an estimate of likely cumulative impacts based on past, present and reasonably foreseeable future actions.
105	The cumulative impacts of climate change have been addressed in Section 4.17.4.2 of the DEIS. Also please see response to Comment No. 18.
106	As stated in Section 4.17.3.1 of the DEIS "typically city and county comprehensive and general plans, BLM RMPs, utility transmission plans, etc., are updated every 10 years to identify planning and infrastructure priorities, directions, and budgets for the foreseeable future." As defined in the BLM Handbook (Section 6.8.3.4), to constitute a reasonably foreseeable future action, a project must be concrete enough that consideration of its effects would be useful to the decision-maker. Additional information regarding the description of the Southline Transmission Project has been provided in the FEIS, Section 4.17.3.2, although the impact analysis for the Southline Project has not been completed as of publication of this FEIS, and therefore there is insufficient information to fully evaluate the cumulative effects with respect to that project.
107	Please see text change response to comment #12. Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to go through an inventory for lands with wilderness characteristics. For the assessment of LWC's for SunZia the only LWC inventory units in New Mexico that were identified based on the manual (MS-6310 was Nutt Mountain that would be crossed by one of SunZia's alternatives (not the Preferred Route). The Preferred Route would also cross a pending LWC unit adjacent to Stallion WSA. For the assessment of LWC's for SunZia the only LWC inventory units in Arizona that were identified based on the manual (MS-6310) was Muleshoe that would be crossed by one of SunZia's alternatives (not the Preferred Route). Thus the potential to preclude wilderness designations is reduced for the Project.

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108 The DEIS also fails to adequately evaluate the cumulative impacts related to the introduction and spread of non-native invasive plants or potential increases in woody vegetation associated with fire suppression. The DEIS fails to evaluate the cumulative impacts and potential changes to fire frequency, fire regimes, and fire management associated with the proposed transmission line. Fire-adapted grasslands may be converted to more woody vegetation with fire exclusion and suppression associated with protecting the transmission line.

109 The cumulative impacts analysis with regards to biological resources is deficient and does not provide an adequate representation of possible effects. Rather than provide analysis for each species and area affected, it generalizes all effects. Some species may be more heavily affected by projects and actions occurring in the region of the project, but this analysis does not give any indication of those effects. We realize how difficult it would be to assess cumulative impacts for each of these species and the affected habitat, but the BLM must acknowledge that the information provided in its cumulative impacts analysis is of little use to fully understanding the effects to these resources.

110 This project, when combined with all other projects and actions occurring in the area, results in significant habitat loss, degradation, and fragmentation. As the DEIS notes, "development of the proposed project, in conjunction with other present and future projects, would contribute to the ongoing fragmentation and loss of natural habitats in the Southwest" (pg. 4-298). Direct mortality through crushing, collisions, etc., is also of great concern. The DEIS states that "standard and selective mitigation measures for the proposed project would minimize any contribution to these cumulative effects to the extent feasible" (pg. 4-292). However, this project would still add to the impacts to these resources. Cumulatively, these actions may result in impacts to species at the population level or may jeopardize some species' survival.

111 The DEIS provides information about sources of human-caused avian mortality (pg. 4-293), although the information presented is not useful for ascertaining the cumulative impacts from this project. For example, the DEIS references a study that indicates that transmission line collisions are estimated to cause 13–17 percent of all human-caused bird deaths in North America. This statement does not give any indication of what species of birds are affected, nor the degree of impact to each species. The only useful information that can be gleaned from this is that transmission lines present a significant risk to the bird class.

112 Species that are already at risk from other factors and long-lived species with low reproductive rates may experience population-level threats from collisions.[111] As noted in the DEIS, the cumulative effect of this project on such species may be quite significant. Although mitigation measures are offered to reduce collisions, bird deaths are still expected to occur from this project. The DEIS does not adequately address such impacts other than to mention that they could occur.

113 Similarly, the impacts from road construction and access into new areas is not suitably addressed. As noted above, roads have very significant impacts on the environment, including increased erosion, recreation and human presence, habitat fragmentation and destruction, increased vehicle use and associated wildlife-vehicle collisions, and much more. The cumulative impacts analysis glosses over such impacts.

[111] Drewitt, A.L., and R.W. Langston. 2008. Collision effects of wind-power generators and other obstacles on birds. Annals of the New York Academy of Science 1134: 233–266.

49

1600	Response to Comment
108	The DEIS discusses potential impacts related to invasive plants (Section 4.6.4.3), as well as the potential effects of the Project on fire management (Section 4.7).
109	Comment noted
110	Comment noted
111	Information on birds and transmission line collision is very incomplete, as few site-specific studies have occurred except at a small number of locations known to create a high risk to specific bird species. Across North America, accurate statements are difficult to make except that there is a generally observed pattern of higher risk for large, heavy-bodied birds. However, even this may be a result of detection bias. The referenced study (Lilley and Firestone 2008) presented a range of estimates from several other authors, for all major categories of human-caused bird mortality. Again, little or no information on species or groups of birds affected was available, in the paper cited or its sources. The numbers of birds that collide with transmission lines annually is highly speculative, and the range of estimates cited by Lilley and Firestone (2008) included a lower estimate of "tens of thousands" to the 174 million noted in the DEIS.
112	As stated in Section 4.17.4.6 of the DEIS, "All transmission lines add to the bird collision risk created by existing transmission lines, communication towers, and other structures." However, it cannot be ascertained that the cumulative effect of this Project would be quite significant as stated by the commenter.
113	Earth: The cumulative effects section regarding soil resources (Pp. 4-284 to 4-286) includes a discussion of future actions that may, along with the Project, result in a cumulative increase in soil erosion within the Project area. These cumulative effects stem from future projects that may intersect or be located near the Project or the unauthorized use of Project access roads by OHVs. Mitigation measures would be implemented to prevent unauthorized use of Project access roads (Table 2-11).

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114 The DEIS anticipates that "impacts to species listed under the ESA are unlikely to be cumulatively significant for future renewable energy developments" because each project would implement mitigation measures to reduce such impacts (pg. 4-296). However, as noted above, such actions can be minor on their own but, when added to the other actions, can be significant. Mitigation rarely eliminates effects on any resource. Even if these measures do reduce impacts, some effects, such as habitat loss, result in permanent and significant negative impacts.

In its discussion of wind energy facilities, the BLM erroneously assumes that wind facilities have a minor effect on bat species. One of the justifications provided for this is that "wind energy facilities are generally sited in open habitat lacking bat roosts" (pg. 4-296). This assumption is completely in error. Although many facilities are not located in the immediate vicinity of cave-dwelling bat roosts, they are frequently located in areas utilized by bats for foraging and migration and, therefore, can and do have significant impacts on bat species.

115 The cumulative impacts analysis also seems to compare potential impacts between different types of projects or other factors, rather than assess the cumulative impacts of all projects. For example, the DEIS states that "other types of future developments…are expected to result in the greatest loss of habitat in the region" (pg. 4-298). As another example, the analysis states that "collision with buildings is the greatest man-made cause of unintentional bird mortality" (pg. 4-293). Such information is not useful unless analysis is provided about how this project adds to those impacts.

116 **XII. CONSULTATION AND COORDINATION**

We, like many of our colleagues (See comments from Defenders of Wildlife et al., Cascabel Working Group, Sky Island Alliance, Tucson Audubon Society, and Friends of the Aravaipa Region) are extremely disappointed in the public process for this proposed transmission project. This proposal has the potential to destroy more acres of land than nearly anything else we have seen in recent years, plus the BLM is proposing to build it in some of the most ecologically sensitive and unfragmented areas in southern Arizona. It is extremely controversial and because of that the BLM should have taken care to listen more closely, engage the public, and provided opportunities for the public to comment and ask questions in a more open and transparent manner. It should have also extended the comment period as the DEIS and accompanying materials is lengthy and in places confusing. It is a lot to digest in the time period offered, let alone provide adequate and comprehensive comments.

XIII. SUMMARY

Sierra Club strongly supports a timely transition from fossil fuel based electricity production to an energy system that incorporates much more energy efficiency and conservation and clean renewable energy. Global Climate Change/Disruption is one of the greatest challenges we face as a nation and for the planet overall. That being said we strongly question whether this proposed transmission line will facilitate additional renewable energy resources and whether the dollars being considered for this project could not have a greater impact in a project that focuses on transmission line upgrades, energy efficiency measures, and generating the electricity closer to where it will be consumed, including through both distributed generation and some larger scale projects. Trying to site this proposed transmission project in some of Arizona's most sensitive and unfragmented areas is totally unacceptable.

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1600	Response to Comment
114	The statement regarding cumulative impacts to listed species takes into account the listed species present in the cumulative effects analysis area that may occur in areas suitable for wind and solar development, as well as the siting of identified reasonably foreseeable future renewable energy facilities. The DEIS notes that cumulative impacts may occur to the Aplomado Falcon, a nonessential experimental population. The FEIS (Section 3.6.6.1) clarifies that this is a nonessential experimental population of a listed species. The FEIS (Section 4.17) clarifies that there is a contrast between the types of effects wind farms may have versus transmission lines. Transmission lines are primarily likely to affect bats if roosts are directly affected (caves, mines, or riparian woodlands in the Project area), while wind farms may cause direct mortality of bats in flight. The species at risk from wind farms would not be affected by construction of the Project, thus no cumulative effects would occur.
115	The cumulative effects analysis describes potential incremental impacts to resources resulting from the proposed action and past, present and reasonably foreseeable future actions. Section 4.17.4 of the DEIS describes potential cumulative impacts to resources resulting from the Project and different types of potential RFFs listed in Table 4-30 of the DEIS. Impacts of the Project and the RFFs combine to represent the cumulative impacts of all projects. Additionally, the Energy Development Scenario provides another level of analysis by forecasting energy development that could result from increasing transmission capacity in areas that exhibit natural qualities for siting renewable energy developments. The Energy Development Scenario estimates likely types of energy development projects, general geographic locations, and amount of land area required for these developments as incremental impacts within the geographic areas of effect. The total cumulative impact includes the impacts of these projects and incremental areas of impact by the SunZia project.
116	The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project has included a total of 22 public meetings and 255 days of public comment. A 45-day public comment period is generally the time provided for a DEIS. The BLM's planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period meets BLM requirements and affords interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that substantive comments received after the 90-day comment period have also been considered before the Final EIS was issued.

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We strongly question the purpose and need for this project and see that all of the routes under consideration would have significant and damaging impacts on the lands, wildlife, and other important resources. Based on the information in the DEIS, our own research, and our knowledge of the impacts and the lands involved, we find that the only alternative that is acceptable is the No Action Alternative. We ask that the BLM select this alternative and keep intact these important lands. We further request that the BLM look at other options, including system upgrades, to meeting the purpose of this proposal.

117

Thank you for considering our comments.

Sincerely,

Sandy Bahr
Chapter Director
Sierra Club – Grand Canyon Chapter

/s/
Randy Serraglio
Southwest Conservation Advocate
Center for Biological Diversity

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1600	Response to Comment
117	Section 2.3 of the DEIS states "The NEPA requires the consideration and evaluation of a range of reasonable alternatives, or alternatives that provide different ways of meeting the agency's purpose and need. Reasonable alternatives are defined as those that are practicable and feasible from a technical and economic standpoint. An EIS must also provide a description of alternatives eliminated from further analysis, along with the rationale for elimination (40 CFR 1502.14[a])." The BLM has considered other options including alternate transmission routes and transmission technologies such as system upgrades, but they were eliminated because they would not be practicable and feasible as described in Section 2.3.3 of the DEIS. Criteria for the evaluation of alternatives considered but eliminated is described in this section as follows: "According to the BLM NEPA handbook, an alternative may be eliminated from detailed analysis if (1) it is ineffective (it would not respond to the purpose and need); (2) it is technically or economically not feasible; (3) it is inconsistent with management objectives for the area (i.e., does not conform with land use plans); (4) its implementation is remote or speculative; (5) it would be substantially similar in design (function and purpose) to another alternative already analyzed; and (6) it would have substantially similar effects to another alternative already analyzed."

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August 22, 2012

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Via electronic mail to adrian_garcia@nm.blm.gov;
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Re: **Comments on Proposed SunZia Southwest Transmission Line Project DEIS**

Dear Mr. Garcia:

The Tucson Audubon Society (TAS) appreciates the opportunity to provide comments on the Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Line Project (SunZia). SunZia proposes to construct two parallel high capacity 500-kilovolt (kV) transmission lines that would span between 460 and 542 miles across federal, state, and private lands between central New Mexico and central Arizona. The Bureau of Land Management (BLM) is the lead federal agency for this project, while the project applicant, SunZia Transmission, LLC is a private company.

TAS is a 501(c)(3) non-profit NGO established in 1949 and representing approximately 5000 households scattered throughout the southeastern Arizona region, primarily in Pima County. TAS' mission is to protect and promote the stewardship of the biodiversity of southeast Arizona by connecting people to their natural world through the study and enjoyment of birds. TAS has partnerships with private and governmental entities and works to conserve and protect habitats where wildlife is at risk to the many factors that threaten its existence – including climate change and the degradation and fragmentation of watersheds and habitat caused by development. http://www.tucsonaudubon.org/

TAS submits comments on behalf of its membership based on the potential adverse impacts to birds and other wildlife of the proposed construction and operation of the SunZia Transmission Line. Our comments relate to public process and to the local, regional and hemispheric adverse impacts (direct, indirect, and cumulative) on special status species and unique and rare habitats, migratory species, resilience in the face of climate change, the sustainable health and economy of our region, and our quality of life. Specifically, we believe it is critical to set a direction for the region that focuses on the best available scientific and commercial information.

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We support responsible development of renewable energy. We understand the need to distribute electricity generated through the development of sustainable sources to address the threats posed by climate change. We support taking old and polluting coal plants offline, decreasing our dependence on oil from overseas, and creating new green jobs in the United States.

However, we insist that our transition to a clean energy future does not come at the expense of remaining high quality wildlife habitats and pristine wild lands. We can and must ensure that the routing of transmission lines avoids culturally and biologically sensitive areas and minimizes the disturbance of significant natural areas and the corridors that connect them.

We applaud the recent designation by the BLM of multiple areas in the west appropriate for the streamlining of development of industrial solar energy resources which were selected with extensive public and agency input to avoid potential conflicts with significant biologic, cultural, and historic resources.

TAS offers the following comments on the SunZia Transmission Line proposal for your consideration.

Recommendation – Adopt the NO ACTION Alternative

1 We recommend that the BLM adopt the No Action Alternative which the National Environmental Policy Act of 1969 (NEPA) requires you to consider as a viable alternative. We believe that the balance of theoretical benefits of this proposal does not outweigh the considerable long term, if not permanent, negative environmental impacts of developing and operating the proposed SunZia Transmission Line.

The environmental consequences of **any** of the other alternatives would result in such significant degradation and potentially irreparable harm to our natural environment that it would be impossible to mitigate for the adverse impacts caused by this proposal.

While we generally share the concerns expressed by the broad spectrum of opposition to the proposed project, including the specific concerns expressed by our colleagues from the Cascabel Working Group (CWG), Defenders of Wildlife (DOW), Sky Island Alliance (SIA), Coalition for Sonoran Desert Protection (CSDP), Sierra Club – Grand Canyon Chapter, Archaeology Southwest, Friends of the Aravaipa Region (FAR) and others, we highlight as especial concern the following:

Procedural and Public Process Concerns

2 We share the concerns expressed by many that the DEIS scheduled public meeting process is flawed, inadequate and unresponsive to a number of issues: the repeated written requests from ourselves and our colleagues for GIS layers with which to do our own analysis in a timely fashion; repeated verbal and written requests for interactive question and answer periods with BLM representatives following the public presentations; repeated verbal and written requests for the scheduling of public hearings; written requests for a formal conflict resolution process incorporating the U.S. Institute for Environmental Conflict Resolution (USIECR); and repeated

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1	Comment noted
2	The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project has included a total of 22 public meetings and 255 days of public comment. A 45-day public comment period is generally the time provided for a DEIS. The BLM's planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period meets BLM requirements and affords interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that substantive comments received after the 90-day comment period have also been considered before the Final EIS was issued.

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verbal and written requests for an extension of the public comment period so that diverse stakeholders can adequately evaluate the massive three volumes (2200 pages) of the DEIS.

In order to meaningfully and substantively comment, the public must have access to all the data the BLM used to arrive at its conclusions. Yet despite numerous written requests for GIS layers from the BLM and their consultant, none were made available until more than half way through the comment period. This has limited our ability to assess the massive amount of information in the DEIS in a professional and thorough manner.

3 It has been impossible to make properly informed comments due to the lack of information of sufficient quality regarding many aspects of the SunZia proposal, for example the impacts of construction activities including, but not limited to, fragmentation and degradation of the hydro-geologic processes and habitat of the impacted areas. In addition, we question what the negative effects of the proposed widespread habitat destruction and degradation will be on wildlife species of concern and wildlife viewing? What are the direct, indirect and cumulative

4 economic impacts on all the sustainable recreational uses within the proposed transmission line's sphere of activity? What is the complete cost benefit picture? There are many other questions that, given sufficient time, we would like to address. We share the concerns of our colleagues throughout our region regarding the adequacy and accuracy of the DEIS analyses and information. For example, BLM may have accepted technical analyses submitted by SunZia consultants without critical review (e.g., claims of being based on "primarily renewable" sources of energy, economics, hydrology, cumulative impacts, etc.).

5 The manner in which the BLM has "managed" implementation of the public process mandated by NEPA has been increasingly controversial, far less than open, interactive, or transparent, and has thus not fully nor adequately engaged the public. BLM has apparently chosen to disregard their own NEPA handbook which states, "Public meetings or hearings are required when there may be substantial environmental controversy concerning the environmental effects of the proposed action [or] a substantial interest in holding the meeting". Numerous requests for interactive public hearings have been ignored.

6 Neither has BLM complied with repeated requests from our colleagues at Archaeology Southwest, who have identified over 500 cultural sites in the lower San Pedro watershed, to utilize the NEPA process of the DEIS to initiate formal consultation under Section 106 of the National Historic Preservation Act in compliance with policy outlined in Instruction Memorandum 2012-108 and/or the Programmatic Agreement between BLM and the Advisory Council on Historic Preservation. The San Pedro and Aravaipa drainages contain near-complete records of 12,000 years of past human activity, including both Native American and Euro-American. For example, one alternative from the Safford area west would likely cause significant impacts and is likely to cause significant concern and controversy. The route would run directly between two (Mt. Turnbull/Santa Teresa Mountains, and the Pinaleño Mountains/Mt. Graham) of the four sacred mountains of residents of both the San Carlos and White Mountain Apache Tribes. The Pinaleño Mountains (aka Mt. Graham) have been found by the Forest Service to be eligible for a "Traditional Cultural Property" designation.

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3	Comment noted
4	The economic role of public lands is acknowledged in the DEIS, As stated in Section 4.13.4.5 "impacts (direct and indirect) to recreation and tourism have been identified by the public during the scoping process. The description of land use impacts to recreation areas or trails resulting from Project construction or operation have been described in Section 4.10.5 and visual impacts to recreation users have been described in Section 4.9.3. The Project would not substantially change the use of recreation areas or trails, and the number or type of recreation users would not be likely to change, therefore economic effects to recreation are not anticipated. Changes in the tourist economy would therefore not be expected." Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area.
5	Please see response to Comment No. 2.
6	The Section 106 process (of the NHPA) was initiated and is ongoing; additional cultural resource surveys will be completed prior to construction. Regarding the alternative route from the Safford area west (Subroute 4A), significant impacts to Mt. Turnbull/Santa Teresa Mountains or the Pinaleño Mountains/Mt. Graham have not been identified.

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Scoping

In our 2010 scoping comments, we clearly stated that "we want assurances that this line will actually deliver energy from renewable energy sources" and that any proposed route through the San Pedro River Valley or impacting the Aravaipa Creek/Canyon is unacceptable due to high levels of ecological sensitivity. We emphasized "complete avoidance", abandoning and "removing consideration" [*sic*] for those routes which would impact the San Pedro River Valley, the Aravaipa ecosystem, and the Agua Verde Creek south of the Rincon Wilderness in Pima County, allowing no impacts to "any high quality riparian lands in Arizona". Not only were these areas not removed from consideration in the DEIS but a new route, not disclosed in the scoping process, located on the western side of the San Pedro River Valley, has suddenly and surprisingly been put forward as the BLM's "preferred alternative". 7

Purpose and Need

BLM has repeatedly stated that the proposed high-capacity SunZia project is intended to deliver power generated from "primarily renewable energy" sources. We appreciate BLM quietly removing this misleading and unsubstantiated claim from its website after repeatedly being called upon to do so. However, we remain concerned that this was not retracted and clarified during the public presentation by the SunZia consultant nor does the DEIS retract this spurious assertion when, in fact, all the current proposed routes appear expressly designed to provide connection to, and a market for, an as yet un-built, speculative 1000 MW natural gas-fired power plant at Bowie, Arizona. Though the exact source of the natural gas is unknown at this time, the potential exists for the gas to be obtained through "fracking", a controversial practice that may adversely impact subsurface aquifers that provide potable drinking water throughout the United States and which have been implicated in causing earth tremors and/or quakes. Why did BLM not consider routes going due west from the northernmost point in New Mexico? Why do all routes pass through Bowie? The DEIS analysis of alternatives is inadequate in this regard. 8 9

BLM claims that this power will provide much needed "renewable" energy to states such as California. However, Michael Picker, Senior Advisor for Renewable Energy Facilities to Governor Jerry Brown of California wrote to the Western Electricity Coordinating Council cautioning them against building long interstate transmission lines to California because California is projected to meet its 2020 33 percent Renewable Portfolio Standard requirement with in-state resources. This he reported in recent correspondence with Mr. Norman "Mick" Meader, Co-Chair of the Cascabel Working Group (CWG), when he wrote, "I was surprised to get your letter regarding SunZia, and the suggestion that the purpose of the power line might be to sell power into California. That seems like a risky business bet. Most California utilities report that they are already oversubscribed for renewable power generation." He goes on to state, "In fact, the California Public Utilities Commission reports that the state's investor-owned utilities have enough contracts from renewable power projects to supply 40% of the state's electricity needs." And further, "In fact, California has become an exporter of renewable power to neighboring states. The Hudson Ranch1 geothermal plant in California's Imperial County recently completed construction and has begun selling power to the Salt River Project 10

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7	The alternative routes presented during the scoping process included alternative routes located east and west of the San Pedro River. The BLM Preferred Route (Subroute 4C2c) is a modification of the route west of the river, which was modified in response to information and concerns provided during the scoping process. Other alternatives within the San Pedro River Valley were considered and eliminated or modified to include portions of routes considered in detail as stated in Section 2.3.3 of the DEIS.
8	The Project would serve the need to deliver electricity from renewable energy generation sources, although the use of transmission lines cannot be limited to exclude other sources. As stated in the DEIS (p. 1-7), "Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services..." and reiterated on p 4-274 of the DEIS, "As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service." Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, "it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation" (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity. The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation. Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines.
9	The range of alternatives considered included potential transmission line routes that could provide electrical interconnections with renewable energy resources located primarily within the Qualified Resource Areas (QRAs) for wind energy, in south-central New Mexico, and the QRAs for solar energy located in southwestern New Mexico (e.g., BLM designated Afton Solar Energy Zone) and southeastern Arizona. Alternatives due west from the northern portion of the study corridors in New Mexico would not be practical or feasible to achieve this objective.
10	Recent projections from the Western Electricity Coordinating Council (WECC) in a table titled, "2022 Common Case Loads and RPS Requirements in WECC Region, Modified as needed for DG Assumptions" (http://www.wecc.biz/committees/BOD/TEPPC/20120106/Lists/Minutes/1/2022%20Renewables_FINAL_20120206.xlsx last visited October 2, 2012) show that approximately 55,765 GWh of new renewable generation will need to be added to the WECC Region (i.e., California, Nevada, Arizona, and New Mexico) between 2011 and 2022 in order to meet RPS. By comparison, DEIS Table 1-1 indicates projected need for 58,654 GWh of renewable [illegible]

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{Arizona's SRP}. We've made this point to regional transmission bodies in the past, urging caution on planning regional transmission solely for bulk power sales of renewables to help meet California's 33% Renewable Portfolio Standard. See my letter to WECC of August 3, 2011..." (appended).

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The DEIS states, at1–3, that the need for the proposed action arises from the Federal Land Policy and Management Act of 1976's (FLPMA) establishment of a multiple use mandate for the management of federal lands. 43CFR 2801.2 specifies that BLM activities be done in a manner that:

a) protects the natural resources associated with public lands and adjacent lands, whether private or administered by a governmental entity;
b) prevents unnecessary or undue degradation to public lands;
c) promotes the use of rights-of-way in common, considering engineering and technological compatibility, national security, and land use plans; and
d) coordinates, to the fullest extent possible, all BLM actions under the regulations in this part with state and local governments, interested individuals, and appropriate quasi-public entities.

BLM is required to "minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved." 43 U.S.C. §1732(d)(2)(a). The DEIS appears to have done just the opposite of what FLPMA requires. The DEIS disregards the current proposal of a Collaborative Conservation Initiative and new National Wildlife Refuge along 40 miles of its "preferred route" through the lower San Pedro River Valley; the purchase with voter-approved Open Space Bonds by Pima County of the A-7 and Six Bar ranches and the Bingham Cienega to facilitate implementation of an Incidental Take Permit (ITP) and draft Multi-species Habitat Conservation Plan (MSHCP) in compliance with Section 10 of the Endangered Species Act (ESA); the designation of the lower San Pedro River Valley as most suitable for open space conservation in the Pinal County Open Space and Trails and Comprehensive Plans; the decades of conservation efforts of numerous public and private entities to conserve the lower San Pedro River watershed; the existence of mitigation lands for previous infrastructure construction and habitat loss managed for restoration and conservation of candidate, threatened, and endangered species; the irreplaceable nature of the globally critical resources to be impacted and the absolute inability to mitigate for their loss or jeopardy; and the existence of a far more relevant and regionally useful transmission line project currently undergoing scoping - the Southline proposal.

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Southline is a proposed southwestern New Mexico-southeastern Arizona transmission project that would connect the Afton generating station northwest of El Paso with the Saguaro generating station north of Tucson, ultimately connecting to Pinal Central and the Palo Verde hub through the Tucson Electric Power Company's new 500-kV lines. It essentially parallels the SunZia proposal over this distance and would actually access solar energy resources predominantly in southwestern New Mexico without the dire ecological consequences to unique resources proposed by SunZia, which are, in contrast, unable to be mitigated. Also in contradiction to SunZia, Southline's public process has been engaging, responsive, open and transparent. Unlike SunZia, Southline appears economically feasible, would provide numerous opportunities to improve southern Arizona's grid capacity and reliability and would, for the most

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11	Comment noted. Recent information provided regarding conservation efforts in the San Pedro River Valley have been added to Sections 3.6.7, 3.10.3, and 3.10.4 of the FEIS.

12 part, follow existent rights-of-way, thus minimizing its potential adverse impacts. Though Southline has its own unique challenges, we support the facilitated permitting and development of Southline as our preferred alternative to the SunZia proposal.

13 The DEIS has disregarded FLPMA's (a) & (b), has failed to consider local and regional land use plans, and has not "coordinated, to the fullest extent possible" with "local governments, interested individuals, and appropriate quasi-public entities." For reasons beyond our ability to comprehend, the DEIS fails to comply with the requirements for an adequate FLPMA or NEPA analysis. We are frankly surprised and disappointed, given BLM's previous history of conservation efforts along both the upper and lower San Pedro River watershed, that the BLM could bring forth any lower San Pedro River Valley or Aravaipa alternative with a straight face for serious consideration.

14 The DEIS (4-424) anticipates that 4,500 MW of new generation capacity empowered by SunZia would result in the disturbance of approximately 40,270 acres of land. The creation of new, massive infrastructure comprised of roads and multiple high towers along miles of a new power line corridor within or near the San Pedro River Valley, its tributaries, the Sulphur Springs Valley or Willcox Playa region would severely compromise two of only eight designated Globally Important Bird Areas in Arizona. As we wrote in our scoping comments, TAS strongly urges that these special wildlife areas be completely avoided and fully protected from any aspect of the SunZia proposal which, in our opinion, will degrade habitats for all wildlife and especially endanger the many high conservation value bird populations they support.

Conservation and Multiple Uses

The southwest is now the fastest growing area in the United States. In order to maintain ecosystem resilience upon which human health depends we must seek a balance between uses that will enable certain lands to be preserved in perpetuity. These priority lands must be identified using robust scientific methodology.

In **Pinal County**, the many years long public process that resulted in the final adopted Open Space and Trails Master Plan examined cultural (pg.14) and biological resources (pg.10), amongst other factors. The eventual product (pgs. 42 & 52) indicate that proposed SunZia alternatives through the lower San Pedro River Valley or Aravaipa region may traverse significant cultural resources, proposed and adopted County Trail Corridors (including the Arizona Trail), and proposed or existing/planned Open Space and a Regional Park. http://pinalcountyaz.gov/Departments/ParksTrails/Documents/FINAL%20Open%20Space%20and%20Trails%20Master%20Plan.pdf

The Pinal County Comprehensive Plan states,

> "The purpose of the Comprehensive Plan Open Spaces and Places chapter is to promote the County's quality of life by providing passive and active recreational opportunities, conserving existing natural resources and cultural heritage for the benefit of present and future generations…Throughout the planning process, residents reinforced their commitment to the preservation of open space and access to trails and recreational opportunities. The Vision component states: *Residents value the large connected open spaces and unique places of Pinal County, not only as part of their*

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12	Southline Transmission Project is not considered an alternative to the SunZia Project. The Southline Project is described as a reasonably foreseeable future (RFF) project in the cumulative effects analysis for SunZia Project, although the environmental impacts for the Southline Project have not yet been evaluated.
13	As stated in Section 3.10.4 of the DEIS, consultation and coordination with state and local governments was conducted including the review of the all affected general and comprehensive plans within the study area. Please also see response to Comment No. 11 regarding conservation plans.
14	The BLM preferred alternative in the Sulphur Springs Valley is immediately adjacent to a pair of existing transmission lines. To the extent possible, the BLM preferred alternative route through the San Pedro River Valley avoids high-quality riparian habitat and permanent streams. An Avian Protection Plan will be developed, and will provide details on the selection and placement of additional mitigation measures such as bird diverters to minimize the collision risk.

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quality of life, but as an important resource to sustain the region's immense wildlife habitat and corridors." (pg. 221)

Also see pgs. 53, 57, 58, and 225-237 of the 2011 Updated Pinal County Comprehensive Plan) http://pinalcountyaz.gov/Departments/PlanningDevelopment/ComprehensivePlanUpdate/Documents/Complete%20CompPlan.pdf . The DEIS fails to analyze or address this.

The following segment regarding **Pima County's Sonoran Desert Conservation Plan** (SDCP) was written in conjunction with the Coalition for Sonoran Desert Protection (CSDP). In 1998, TAS was a founding member of the CSDP, which works to create a community where ecosystem health is protected, nature and healthy wild animal populations have value, and visitors, children and future generations can all drink clean water, breathe clean air, and find wild places to roam. The CSDP is committed to working toward science-based land use planning, focusing on Pima County's national award winning conservation planning effort and its efforts to obtain an ITP in association with the implementation of its draft MSHCP.

The county's SDCP seeks to conserve the most ecologically valuable lands and resources across the region, while guiding growth into more appropriate areas. The SDCP addresses several elements of resource conservation, including cultural preservation, open space conservation, protection of parks and natural reserves, ranch conservation, and ecological conservation http://www.pima.gov/cmo/sdcp/maps.html. The San Pedro River is identified as a "Priority Habitat and Corridor", a "Proposed Nature Preserve", an area of ranch preservation, cultural and environmental significance, and an "Important Riparian Area" (IRA). http://www.pima.gov/cmo/sdcp/habitat.html.

The biological goal of the SDCP is "to ensure the long-term survival of the full spectrum of plants and animals that are indigenous to Pima County through maintaining or improving the ecosystem structures and functions necessary for their survival." Objectives include:

> "promote recovery of federally listed and candidate species to the point where their continued existence is no longer at risk; where feasible and appropriate, re-introduce and recover species that have been extirpated from this region; maintain or improve the status of unlisted species whose existence in Pima County is vulnerable; identify biological threats to the region's biodiversity posed by exotic and native species of plants and animals, and develop strategies to reduce these threats and avoid additional invasive exotics in the future; identify compromises to ecosystem functions within target plant communities selected for their biological significance and develop strategies to mitigate them; and {*promote long-term viability for species, environments and biotic communities that have special significance to people in this region because of their aesthetic or cultural values, regional uniqueness, or economic significance.*}" as noted at 3-181 of the DEIS (italics added).

Conservation strategies entail:

> "Focus future growth and associated infrastructure expansion in areas in closest proximity to existing urbanized areas, not in areas of highest biological richness. Significantly lower intensity of future land uses allowed in certain biologically sensitive areas near major washes, within ecologically rich habitats, adjacent to Saguaro

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National Park, and other sensitive areas of Pima County. Avoid or minimize future losses and fragmentation by a publicly supported land acquisition and conservation program. Open Space Acquisition funds and other private/public partnerships enable the acquisition of lands or conservation easements adjacent to the existing reserve system as well as ranches conserved through acquisition of development rights or conservation easements, thereby implementing the Ranch Conservation and Mountain Park Expansion Elements of the SDCP. Prioritize 26 percent of the CLS {Conservation Lands System} for conservation by the adoption of Habitat Protection Priorities in Eastern Pima County. This includes approximately 525,000 acres of biological core, important riparian areas, threatened and endangered species management areas, and special landscape elements. Pima County will continue to nominate and pursue acquisition of biologically sensitive lands for reclassification by the Arizona State Land Department under the Arizona Preserve Initiative, or through state land constitutional reform. Conserving important biological resources has become a very important part of future land use decisions."

The Conservation Lands System (CLS) is a part of the Environmental Element of Pima County's Comprehensive Land Use Plan's Regional Plan Policies, in compliance with Arizona law and Growing Smarter legislation, and provides one mechanism in the tool box to implement the county's draft ITP and MSHCP. The DEIS fails to evaluate SunZia's impacts to important elements of this regional conservation planning effort. 15

Acres of Pima County's Conservation Lands System that would be impacted by typical 400-foot right-of-way associated with SunZia routes. (Source: CSDP) 16

CLS Categories	SunZia Routes Through Pima County		
	Preferred	4C2	4C2 Local Alternative
Important Riparian	24 acres	670 acres	976 acres
Biological Core Management	638 acres	970 acres	462 acres
Multiple Use Management	124 acres	592 acres	173 acres
Special Species Management	*See analysis below*		

Important Riparian Areas (IRA) constitute the most biologically sensitive of CLS lands. They are "critical elements of the Sonoran Desert where biological diversity is at its highest. [They] are valued for their higher water availability, vegetation density, and biological productivity. They are also the backbone to preserving landscape connectivity."

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15	The Pima County Comprehensive Plan Update Regional Plan Policies, including the CLS were reviewed. The SunZia Project does not conflict with the CLS as stated in the comment because, as stated on page 36 of the Regional Plan Policies, "These policies apply to new rezoning and specific plan requests, time extension requests for rezonings, requests for modifications or waivers of rezoning or specific plan conditions, including substantial changes, requests for Comprehensive Plan amendments, Type II and Type III conditional use permit requests, and requests for waivers of the subdivision plat requirement of a zoning plan." The SunZia Project will require none of the stated actions, and therefore is not in conflict with the stated goals or requirements of the CLS.
16	As noted in the comment, the BLM preferred alternative would create lower impacts for some resources relative to other alternatives in the San Pedro River Valley (Table H-6, H-7). The DEIS notes that components of Pima County's Conservation Lands System would be crossed. This discussion has been expanded in the FEIS (Section 3.6.7, 4.6.4.6).

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http://www.pimaxpress.com/Documents/planning/ComprehensivePlan/PDF/Policies_Legend/Regional%20Plan%20Policies%20%28pp.%2019-65%29.pdf

Pima County guidelines recommend a landscape conservation objective of 95% undisturbed natural open space for Important Riparian Areas.

Biological Core Management Areas are "those areas that have high biological values. They support large populations of priority vulnerable species, connect large blocks of contiguous habitat and biological reserves, and support high value potential for five or more priority vulnerable wildlife species." Pima County guidelines recommend a landscape conservation objective of 80% undisturbed natural open space for Biological Core Management Areas.

Multiple Use Management Areas are "those areas where biological value are significant…[and] support populations of vulnerable species, connect large blocks of contiguous habitat and biological reserves, and support high value potential habitat for three or more priority vulnerable species." Pima County guidelines recommend a landscape conservation objective of 66-2/3% undisturbed natural open space for Multiple Use Management Areas.

Special Species Management Areas (SSMA) are "areas defined as crucial for the conservation of specific native floral and faunal species of special concern to Pima County. Currently, three species are designated as Special Species: Cactus Ferruginous Pygmy-owl, Mexican Spotted Owl, and Southwestern Willow Flycatcher." This designation is an overlay on top of the other CLS land designations. Pima County guidelines recommend at least 80 percent of the total acreage of lands within this designation shall be conserved as undisturbed natural open space and will provide for the conservation, restoration, or enhancement of habitat for the affected Special Species. As such, land use changes will result in 4:1 land conservation (i.e., four acres conserved for every one acre developed) and may occur through a combination of on- and off-site conservation inside the Special Species Management Area. The 4:1 mitigation ratio will be calculated according to the extent of impacts to the total surface area of that portion of any parcel designated as Special Species Management Area."

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Acres of Pima County's Special Species Management Areas that would be impacted by typical 400-foot right-of-way associated with SunZia routes. (Source: CSDP)

Overlap with CLS Categories	SunZia Route 4C2
Important Riparian	284 acres
Biological Core Management	88 acres
Multiple Use Management	473 acres
Areas outside CLS	3 acres

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17	The DEIS discusses potential impacts to special-status species throughout the Project area. No impacts to Mexican Spotted Owls are anticipated. No suitable nesting habitat for Southwestern Willow Flycatchers would be affected, although the BLM preferred alternative (Section 4.6.5.4) crosses designated critical habitat. Potential Cactus Ferruginous Pygmy-owl habitat is noted to be widespread throughout much of the Arizona portion of the Project area (Section 3.6.6.1).

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Finally, Critical Landscape Connections are another important component of the CLS. They are "broadly defined areas that provide connectivity for movement of native biological resources but which also contain potential or existing barriers that tend to isolate major conservation areas." Two of the Critical Landscape Connections are "across the I-10/Santa Cruz River corridors in the northwest" and "across the I-10 corridor along Cienega Creek in the east", two areas crossed by the 4C2 route.

18 The proposed SunZia Project poses significant threats to the CLS, but the DEIS does not quantify or even qualify impacts to the CLS, a crucial component of the larger SDCP. Without further evaluation of the CLS and other components of the SDCP such as Pima County's proposed MSHCP and ITP, the DEIS does not satisfy the federal mandate that a DEIS "shall include discussions of possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned." 40 C.F.R. § 1502.16(c). Furthermore, the DEIS

19 does not align with 40 C.F.R. § 1506.2(d) which states that, "To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law."

Pima County has sought to find a balance between development and conservation where priority conservation and preservation lands are identified and conserved using robust scientific methodology. There is certainly precedence for this approach. Not all public lands have a "multiple use ethic." Some are established in order to protect specific values, including natural hydro-geologic processes and wildlife. Wilderness areas, wildlife refuges, national parks, and national monuments are just a few of those areas, which have a more protective higher mandate than "multiple use."

The **Arizona Game & Fish Department's** (AZGFD) Strategic Plan for the Years 2007–2012, ***Wildlife 2012***, states that the goals of its wildlife program are "to conserve and preserve wildlife populations and habitat; to provide compatible public uses, while avoiding adverse impacts to populations and habitat; to promote public health and safety; and to increase public awareness and understanding of wildlife resources."

The **National Park Service** mission is to "preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations." Portions of Saguaro National Park East and the Rincon Wilderness Area will be able to view the proposed power line.

The mission of the **BLM's National Landscape Conservation System**, which includes the Upper San Pedro River Riparian National Conservation Area (the Nation's first) and the Las Cienegas National Conservation Area (NCA), a pending Important Bird Area (IBA), is "to conserve, protect, and restore these nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations." Again, the protection of these attributes is prioritized over other activities. One SunZia route could impact the La Cienegas NCA.

1601	Response to Comment
18	See comment response #15 above.
19	Descriptions of affected state and local land use plans are provided in Section 3.10.4 of the DEIS. Section 4.10.5 of the DEIS summarizes impacts to existing land use, and state and local land use plans. Where inconsistencies with land use plans have been identified, mitigation measures (e.g., Selective Mitigation measure SE 8, which would minimize amount of sensitive features disturbed and/or reduce visual contrast) would be implemented to avoid or minimize specifically impacts to planned land use and associated visual resource impacts.

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The entire region enjoys the various diverse habitats within the **Coronado National Forest**'s multiple units, much of which is designated multiple use. Yet even the very definition of "multiple use" in the Multiple-Use Sustained Yield Act of 1960 recognizes "that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output."

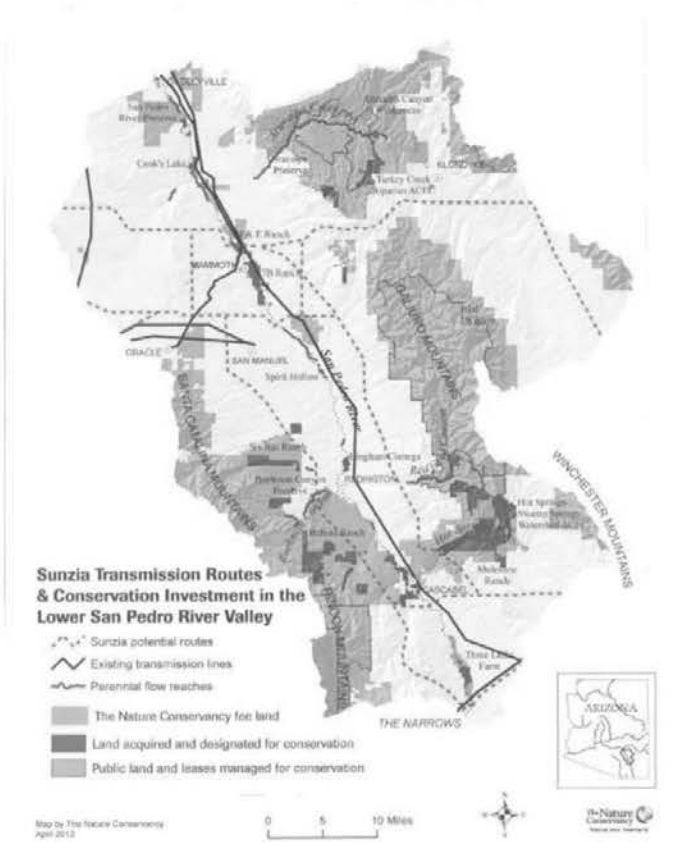
The **National Wildlife Refuge System Administration Act of 1966** mandates the standard of compatibility, i.e.: uses of refuge lands must be determined to be compatible with the purposes for which individual refuges were established. This standard was later clarified in the National Wildlife Refuge System Improvement Act of 1997: Conservation is the priority, then various compatible uses. The DEIS fails to adequately analyze a proposal for a new National Wildlife Refuge is currently in the scoping phase for the lower San Pedro River Valley. 20

The DEIS implication that the current SunZia proposal could be permitted in compliance with FLPMA because the lower San Pedro River Valley is already impacted and by inference fragmented by human uses is flawed. The analysis is inadequate under NEPA and FLPMA. 21

We would call your attention to the significant investment to conserve the cultural, historic, and biologic resources of the lower San Pedro River Valley by private parties, non-profit organizations, and state and federal agencies. Along the lower San Pedro River, the BLM, the BOR, the AZGFD, Pima County, TNC, SRP, and private landowners have protected close to 40,000 acres and invested over $25 million dollars in acquisitions of conservation/preservation lands and water rights (Baker, 2010).

The Nature Conservancy's (TNC's) April 2012 map, shown on the next page (p12), illustrates the proximity and potential for fragmentation of the proposed SunZia alternatives to conserved areas along the lower San Pedro River Valley and Aravaipa Creek. It documents the extraordinary efforts and investment, by diverse stakeholders, in attempting to preserve and conserve over 500 archaeological sites of cultural and historic importance, as well as the unique and irreplaceable biological resources of the watershed. However, when considering the river and its tributaries in its entirety, TNC estimated in the spring of 2012 that more than 733,589 acres of public and private restoration and conservation sites are encumbered by easements. 22

1601	Response to Comment
20	The DEIS discusses the Lower San Pedro River Collaborative Conservation Initiative (Section 3.6.7.9), including locations where alternatives cross the study area. However, impacts to planning cannot be reliably assessed at this time, early in the scoping process without identified, participating landowners.
21	The analysis for the DEIS was conducted to identify impacts that would occur in addition to previous impacts (considered the baseline conditions). Any inference that implies the Project could be permitted because the San Pedro River Valley is already impacted is incorrect.
22	The DEIS (Section 3.10.1.3, 3.10.3.3) discusses the presence of conservation easements in the study area, and locations where existing conservation efforts may be affected by the proposed Project. This discussion has been expanded in the FEIS.



Some of the lower San Pedro River Valley easements are listed in more detail below:

1. **San Pedro River Preserve**: TNC is restoring this 6,900-acre property—formerly a catfish and pecan farm—and re-seeding it with native grass. Water is being restored to the river and the plant community is rebounding. Partner: Bureau of Reclamation (BOR).

2. **Aravaipa Canyon**: Flanked at either end by a TNC preserve, this 58,900-acre wilderness is noted for its majestic cliffs, bighorn sheep and a creek which supports a thriving population of native fish. Partners: BLM, AZGFD.

3. **H & E Land & Cattle**: TNC is restoring the natural washes and native grasses on this 570-acre property, thereby improving the floodplain and returning water to the river. Partner: Arizona Department of Water Resources.

4. **7B Ranch**: TNC is managing this 3,100-acre property to eliminate invasive species and restore its wetlands and the largest mesquite bosque remaining in the Southwest. Partners: Resolution Copper Company, U.S. Fish & Wildlife Service (USFWS), BLM.

5. **Mercer Ranch Rancher**: Mike Mercer has planted native grass along the river's floodplain and is using significantly less water than on previous crops. Partners: USFWS, Mercer family.

6. **Buehman Canyon**: From lands high up in the Santa Catalina Mountains, water flows down this canyon—a critical wildlife corridor—to feed the San Pedro. This parcel contains designated "Outstanding Arizona Waters" by ADEQ. TNC donated the parcel to Pima County in January of 2012. Partners: TNC, Pima County, Forest Service.

7. **Bingham Cienega**: This restored spring-fed marsh sits on 285 acres with cattails, native grass, mesquite, cottonwood and willow. Owned by Pima County. Partners: TNC & Pima County.

8. **A-7 Ranch**: TNC originally purchased this 6,828-acre property to conserve the wildlife corridor extending from the forests of the Santa Catalina Mountains to the river. Purchased by Pima County with $2 million of voter approved Open Space Bonds for conservation purposes. The preferred alternative would bisect the ranch with a denuded right-of-way (ROW). Partners: TNC & Pima County.

9. **Hot Springs Canyon**: Five landowners and TNC signed conservation agreements covering 1,700 acres of this critical wildlife corridor that connects the Muleshoe Ranch to the San Pedro River. Partners: Cascabel Hermitage Association, Saguaro-Juniper Association, BLM, private landowners.

10. **Muleshoe Ranch Cooperative Management Area**: TNC manages this 57,500-acre property in the Galiuro Mountains to restore native grasslands and streamside areas, creating excellent habitat for rare native fish. Partners: BLM, Forest Service, AZGFD.

11. **3 Links Farm**: TNC purchased and placed conservation easements on 2,209 acres, restricting future development and restoring water to the river. Now this once-dry, six-mile stretch of river is permanently flowing, and the beavers have returned. Partners: BOR, SRP, private landowners.

1601

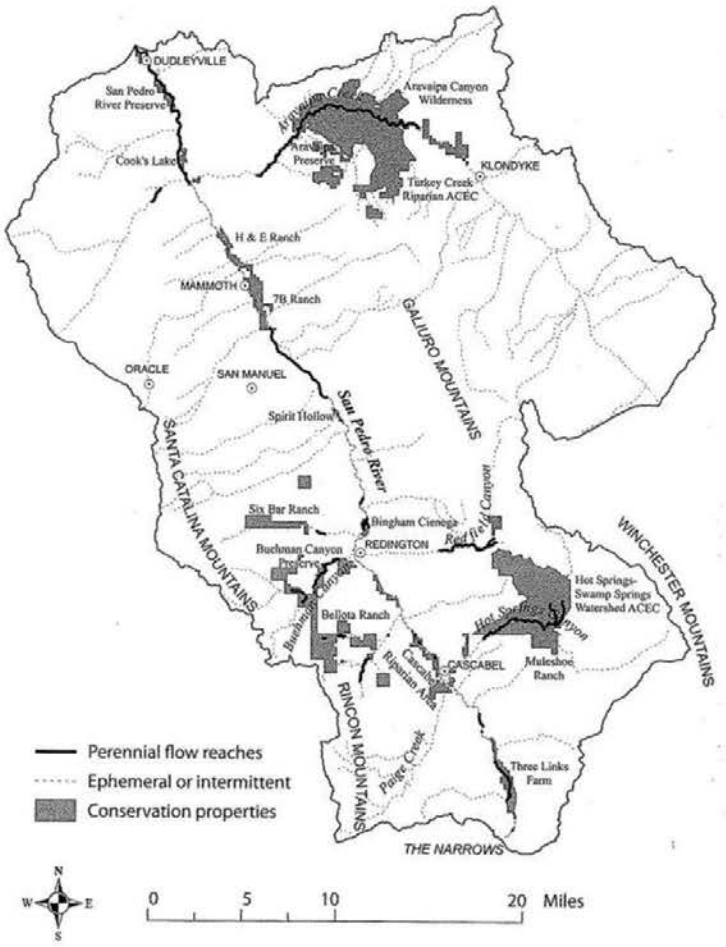


Fig. 19.1. Map of lower San Pedro River basin showing riparian conservation areas (public and private). Map prepared by Dale Turner, Arizona Nature Conservancy.

1601	Response to Comment
	See following page(s)

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While the previous TNC map does not include all current conservation or archaeological easements, it is a clearer illustration of some of the easements along the lower San Pedro River Valley.

State Trust Land Reform

State Trust land reform efforts have a long history in Arizona. The desire to provide for buffering of military lands, accountability, transparency and the public good have led to numerous efforts which have increasingly focused on the best available science to identify those lands which, if conserved in perpetuity, would most benefit the resilience of the ecosystem and give the biggest bang for the buck expended.

The most recent efforts in this regard have identified a suite of State lands in the lower San Pedro Valley that would provide a critical wildlife linkage, or corridor, between the Galiuro range and the Santa Catalina/Rincon Mountains complex, illustrated in a darker blue color below.

Map Courtesy of CWG. Impact of the SunZia preferred alternative on Arizona State Trust Land being considered for inclusion in conservation status in Arizona State Trust Land Reform initiatives.

23 The DEIS fails to adequately consider and analyze potential effects of the SunZia proposal with regard to fragmentation and local, regional and state land use planning and conservation efforts.

Economic Impact Analysis

24 The DEIS has used a deficient economic analysis that examines only one side of the economic

1601	Response to Comment
23	Local, regional, and state land use plans were reviewed for future and planned land uses, and mapped accordingly, which was then incorporated into the impact assessment. A discussion of conservation easements throughout the study corridor has been added to the FEIS (Section 3.10.3.3).
24	Section 4.13.4.5 of the DEIS potential negative economic impacts have been identified as follows. Additional and updated and information regarding these economic issues have been provided in the FEIS. "Impacts to grazing lands that could occur as a result of loss of vegetation from Project construction have been estimated and included in the assessment of land use impacts for BLM lands (see Section 2.4 and Section 4.10.5). Grazing and ranching operations could be temporarily affected by Project construction, where access is restricted by construction activities. Mitigation measures would be applied to minimize the impacts during construction in coordination with land owners and managers, such as structure installation and repair of fences and gates. Overall, permanent ground disturbance would be approximately 6 acres per mile of right-of-way. Typically, grazing could continue within the Project right-of-way during operation of the transmission lines, and more than 80% of the vegetation within the right-of-way would not likely be disturbed by construction of these facilities, and would remain open for grazing… Studies have been reviewed regarding the potential effects to property values in proximity to HVTLs. These studies examine a range of contributing factors to real-estate value impacts from HVTLs, such as the effects of visibility and their extent of encumbrance (e.g., restrictions, easements, and encroachments), while controlling for general market factors, property types, and site-specific conditions. The studies have found that often no effect to property values occur based on the presence of HVTLs; in studies where effects were found, the effects generally resulted in a 10 percent or smaller reduction in property value (Chalmers et al. 2009; Delaney et al. 1992; Jackson 2010; Jackson et al. 2010)." Temporary economic impacts resulting from the proposed Project have not been identified. Also please see response to Comment No.25 regarding tourist economy.

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24 equation — the economic benefits of the proposed SunZia transmission line — while ignoring the negative economic impacts to other sectors. An in depth analysis needs to be done using the best available scientific and commercial information.

25 The San Pedro River and its tributaries, the Aravaipa Creek area, Sulphur Springs Valley and the Willcox Playa and associated environs, represent well-known ecotourism hot-spots in this region and birders in particular come from all over the world to bird this region. If this ecotourism were reduced because of direct, indirect and cumulative impacts of the transmission line, this would directly, indirectly and cumulatively adversely impact the various communities, from San Simon to Winkelman to Benson and Tucson to Oracle to Wilcox, that benefit so much from ecotourism. Ecotourism is especially important for dispersed rural communities.

In short, the DEIS fails to adequately analyze the economic role of public lands, river valleys, playas and open spaces in supporting local economic health and it ignores existing research documenting the economic importance of protected public land resources. Income from tourism is a sustainable source of income, but requires that the resource is managed and protected. The proposed SunZia transmission line has the potential to forever damage sustainable regional resources for a questionable purpose and need.

Watchable Wildlife Economics

One of the AZGFD's recreation strategies is to "Identify, assess, develop and promote watchable wildlife recreational opportunities." Audubon members enjoy birding, hiking, wildlife viewing, and photography and think it is critically important to protect wildlife habitat and ensure sustainable populations of the full spectrum of native wildlife species.

You might be surprised to learn that **birding leads ALL other recreational activities in promoting the economic growth of ecotourism in Arizona**.

In a 2006 study, the Outdoor Industry Foundation reported that all outdoor wildlife-related recreational activities generated $730 billion annually for the United States economy, and of that, watchable wildlife generated $43 billion annually. They reported 66 million Americans participated in wildlife viewing, which supported 466,000 jobs. Estimated economic returns included retail sales averaging $8.8 billion, trip related expenditures of $8.5 billion, and state and federal tax receipts of $2.7 billion. The report is available at http://www.outdoorindustryfoundation.org./. Although much of this economic impact is due to outdoor recreation, other visitors may come to these areas for sight-seeing, for family gatherings, for educational benefits and for many other values not captured by the category of outdoor recreation.

Outdoor recreation, natural resources conservation and historic preservation in the United States all have measurable economic impacts.According to a 2011 study by the National Fish & Wildlife Foundation, http://www.nfwf.org/Content/ContentFolders/NationalFishandWildlifeFoundation/HomePage/ConservationSpotlights/TheEconomicValueofOutdoorRecreation.pdf, a minimum estimate of the combined value of outdoor recreation, nature conservation and historic preservation shows that over 9.4 million jobs were created while $107 billion was generated by local, state and federal tax revenues resulting in a minimum total economic impact nationally of $1.6 trillion! Outdoor

1601	Response to Comment
25	The economic role of public lands is acknowledged in the DEIS, As stated in Section 4.13.4.5 "impacts (direct and indirect) to recreation and tourism have been identified by the public during the scoping process. The description of land use impacts to recreation areas or trails resulting from Project construction or operation have been described in Section 4.10.5 and visual impacts to recreation users have been described in Section 4.9.3. The Project would not substantially change the use of recreation areas or trails, and the number or type of recreation users would not be likely to change, therefore economic effects to recreation are not anticipated. Changes in the tourist economy would therefore not be expected." It is acknowledged that there are many ecotourism attractions throughout the study area, although it is noted that the BLM Preferred Alternative would not cross Aravaipa Creek, and would not affect the Wilcox Playa area or any of the crane watching sites identified on the Wings Over Wilcox festival map. Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area. Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area.

recreation sales (gear and trips combined) of $325 billion per year are greater than annual returns from pharmaceutical and medicine manufacturing ($162 billion), legal services ($253 billion), and power generation and supply ($283 billion).

The U.S. Fish & Wildlife Service contributed about $4.2 billion in economic activity and supported over 32,000 jobs through their management of 553 National Wildlife Refuges and thousands of smaller natural areas in the United States. One detailed study of visitation to National Wildlife Refuges (Caudill and Henderson, 2005) looked further into the impacts on the local communities around these reserves in 2004. In 2004, there were 36.7 million visitors who generated $1.64 billion of economic activity in regional economies. Caudill and Henderson went further into their analysis and showed that about two-thirds of the total expenditures were generated by non-consumptive activities and not fishing (27%) or hunting (5%), which illustrates the value these natural areas have for passive enjoyment of nature. The authors also conducted willingness-to-pay studies to determine the value of these refuges beyond what it actually cost them to visit. They found that visitors showed a consumer surplus of more than $1.3 billion, with $816 million of this amount attributed to non-consumptive visitation.

The most recent economic analysis using USFWS data calculated by Arizona county states that ecotourism is worth over $1.5 billion dollars to Arizona each year - over $300 million in Pima County, over $95 million in Pinal County, over $25 million in Cochise County, and over $13 million in Graham County each year.
http://tucsonaudubon.org/images/stories/conservation/AZ_County_Impacts_-_Southwick.pdf.
This analysis revealed that Arizona created 15,058 full and part-time jobs and accounted for salaries and wages of $429,391,051, or nearly $430 million in total household income. Arizona engendered over $57 million in state taxes (state sales taxes of $46,756,837 and state income taxes of $10,821,828) and federal income taxes of $75,544,307. Home owners near parks and protected areas are repeatedly seen to have property values more than 20% higher than similar properties elsewhere.

Ecosystem Services, Economics and Climate Change

The term **"Ecological values"** refers to clean air, clean and abundant water, fish and wildlife habitat and other values that are generally considered public goods. "**Ecosystem services**" include all the functions and natural processes performed by nature that would otherwise have to be paid for by people through the construction of facilities. These services include climate regulation, waste treatment, water supply, carbon sequestration, nutrient cycling, habitat provision and many others that all help modulate and regulate climate, weather and various resources needed for human comfort, security and quality of life. Wetlands, forests, grasslands, river systems, and lakes all provide environmental services.

For example, the total value of ecosystem services provided by the acreage of natural habitats in National Wildlife Refuges in the United States totaled $32.3 billion/year, or $2,900 thousand/acre/year (Ingraham and Foster, 2008). In fact, the total amount of ecosystem services provided by these categories of natural land amount to about $1.6 trillion, which is more than 10% of the GDP in 2009 when land in the contiguous United States is tallied.

Consider birds, which contribute irreplaceable ecosystem services: according to the **American Bird Conservancy's 2007 report**,

> "Birds play an important role in maintaining the ecosystems on which humans depend to maintain our quality of life and civilization. For example, birds eat billions of insects each year that left unchecked could decimate our crops. Birds also play an important role as pollinators, providing a fundamental service to agricultural production that simply cannot be replaced by other means. According to the Smithsonian Migratory Bird Center, birds eat up to 98% of budworms and up to 40% of all non-outbreak insect species in eastern forests. The value of this insect control has been estimated to be as much as $5,000 per year per square mile of forest."
>
> "Birds are also superb "canaries in the coal mine", or indicators of environmental health and change. Rapid declines in bird numbers have alerted us to the harm being caused to humans and the environment by toxic chemicals. And birds, by virtue of their insect control services, can help prevent the spread of insect borne diseases such as malaria and dengue fever, both formerly prevalent in the wetlands of the arid southwest. The knowledge we gain from birds directly affects our quality of life and our understanding of how economic development can be made more environmentally sustainable."
> http://www.abcbirds.org/habitatreport.pdf

Maintaining sustainable rural and urban landscapes is important for the public health, safety, and quality of life for all those who live in Arizona and New Mexico. The results from the **2012 Colorado College State of the Rockies Conservation in the West poll** find that Arizona and New Mexico voters across the political spectrum — from Tea Party supporters to those who identify with the Occupy Wall Street movement and voters in-between — support upholding and strengthening protections for clean air, clean water, natural areas and wildlife. Voters also view Arizona's and New Mexico's parks and public lands as essential to their state's economy and quality of life.
http://www2.coloradocollege.edu/stateoftherockies/conservationinthewestsurvey_media_coverage.html

Sustainable forestry, agriculture and ranching practices can help to maintain and restore the vitality of our communities while also helping to preserve our culture, natural landscapes and ecosystems. It only makes common sense that it should be our general policy to support the maintenance, enhancement and restoration of ecosystem values and services throughout the state, focusing on the protection of land, water, air, soil and native flora and fauna upon which our human health and safety depend.

We encourage landowners within the potentially impacted area(s) to explore gaining access to additional sources of revenue such as emerging ecosystem services markets that help landowners diversify their incomes, improve the ecological functions of their lands and pass along their lands and the lands' associated benefits to future generations. The term **"Ecosystem services market"** describes a system in which providers of ecosystem services can access financing to protect, restore and maintain ecological values.

Employment and economic opportunities are important in order to maintain our quality of life while providing assurances that development will occur in suitable locations so that ecological

values will be maintained and improve. We must recognize the need for biological connectivity and the overall ecological viability of conservation and restoration efforts at a landscape scale, such as has already occurred along portions of the lower San Pedro River Valley and Aravaipa Creek and environs. The conservation and restoration of these rare ecosystem services will help avoid carbon emissions, help address impacts associated with climate change and help natural resources adapt to these impacts.

It is widely accepted that the Sonoran ecoregion is currently in the throes of a **profound drought** and that these types of drought have occurred historically in the region. On June 23, 1999, the Arizona Division of Emergency Management declared a statewide drought emergency (PCA99006) which remains in effect as a "current open disaster" at this time. However, new findings appear to indicate that weather changes associated with global climate change may exacerbate the negative impacts of previous climate patterns.

University of Arizona climate models document current, and predict future, above average warming trends in the Sonoran desert ecoregion which may exacerbate the extremes of previous precipitation patterns. Jonathon Overpeck, director of the U of A's Institute for the Study of Planet Earth, was a lead author on the April 2007, Nobel Prize- winning Intergovernmental Panel on Climate Change's report linking atmospheric greenhouse gas increases to human activity. "The climate in the Southwest is changing faster than anywhere else in the U.S.," he said. "The implications of climate change have already started in Arizona. We'll have to deal with warmer temperatures, less precipitation and more drought…" "These temperature changes that are coming are huge, will demand a lot of water and will make the droughts of the past look pale because they will be so much hotter," he testified before the House Science and Technology Committee at a hearing on water supply challenges for the 21st century (AZ Daily Star 5/15/2008). Published May 2008, the ***Synthesis and Assessment Product 4.3 (SAP 4.3): The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States*** (http://www.sap43.ucar.edu/) is the most extensive examination of the impacts of climate change on important U.S. ecosystems undertaken to date. It concludes that, in arid region ecosystems that have not co-evolved with a fire cycle, the probability of loss of iconic, charismatic mega flora such as saguaro cacti and Joshua trees will greatly increase and that:

- Climate change is already affecting U.S. water resources, agriculture, land resources, and biodiversity, and will continue to do so.
- Higher temperatures will negatively affect livestock. Warmer winters will reduce mortality but this will be more than offset by greater mortality in hotter summers. Hotter temperatures will also result in reduced productivity of livestock and dairy animals.
- Forests in the interior West, the Southwest, and Alaska are already being affected by climate change with increases in the size and frequency of forest fires, insect outbreaks and tree mortality. These changes are expected to continue.
- Much of the United States has experienced higher precipitation and streamflow, with decreased drought severity and duration, over the 20th century. The West and Southwest, however, are notable exceptions, and increased drought conditions have occurred in these regions.

- Weeds grow more rapidly under elevated atmospheric CO_2. Under projections reported in the assessment, weeds migrate northward and are less sensitive to herbicide applications.
- There is a trend toward reduced mountain snowpack and earlier spring snowmelt runoff in the Western United States.
- Invasion by exotic grass species into arid lands will result from climate change, causing an increase fire frequency. Rivers and riparian systems in arid lands will be negatively impacted.
- A continuation of the trend toward increased water use efficiency could help mitigate the impacts of climate change on water resources.
- The growing season has increased by 10 to 14 days over the last 19 years across the temperate latitudes. Species' distributions have also shifted.

Seager *et al.* (2007) examined future subtropical drying by analyzing the time history of precipitation in 19 climate models. Of the total of 49 individual projections conducted with the 19 models, even as early as the 2021–2040 period, only 3 projections show a shift to a wetter climate. These simulations provided initial conditions for 21st-century climate projections. In the multimodel ensemble mean, there is a transition to a sustained drier climate that begins in the late 20th and early 21st centuries in the southwestern United States and parts of northern Mexico. In general, large regions of the relatively dry subtropics dry further, whereas wetter, higher-latitude regions become wetter still. The American Southwest experiences a severe drying. This pattern of subtropical drying and moistening at higher latitudes is a robust feature of current projections with different models of future climate.

Seager explains the drying of subtropical land areas that, according to the models, is imminent or already under way is unlike any climate state we have seen in the instrumental record. It is also distinct from the multidecadal megadroughts that afflicted the American Southwest during Medieval times. The most severe future droughts will still occur during persistent La Niña events, but they will be worse than any since the medieval period, because the La Niña conditions will be perturbing a base state that is drier than any state experienced recently (Seager *et al.* 2007, *Science*, 25 May 2007, Vol. 316, pgs. 1181-1184).

Powell, in his 2011 *Pima County Inventory of Conserved Open Space Perennial Water*, found that the county's San Pedro open space lands contained significant springs and tinajas that may contribute to many species adapting to climate change: Youtcy Spring, where Lowland leopard frogs were found; two tinajas each in Youtcy Canyon and Espiritu Canyon; Grapevine Spring; and tinajas/pools in Buehman and Bullock Canyons, where Lowland leopard frogs and longfin dace were found. All of these sources contribute to the surface water availability in the San Pedro watershed.

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Powell states that the results of the census indicate there is an average of one source of perennial water for every 20,000 acres of county owned open space. He says,

> "This does not discount the importance of sites with intermittent or ephemeral surface water. These areas can be crucial resources for a wide range of resources. For example, ephemeral surface water, which sometimes remains for only a few weeks, is used almost exclusively by most of the desert toads (family Bufonidae). These surface water resources play critical a critical role in a host of ecosystem functions such as dispersal of aquatic animals, nutrient cycling, and sediment movement."

Powell goes on to report that regional models predict a 10-20% decrease in annual precipitation, primarily decreasing winter rains, and more severe summer monsoons resulting in drying of already stressed ecosystems.

Levick *et al*. 2008, describe the importance of intermittent and ephemeral water sources:

> "Ephemeral and intermittent streams make up approximately 59% of all streams in the United States (excluding Alaska), and over 81% in the arid and semi-arid Southwest (Arizona, New Mexico, Nevada, Utah, Colorado and California) according to the U.S. Geological Survey National Hydrography Dataset...Ephemeral and intermittent streams provide the same ecological and hydrological functions as perennial streams by moving water, nutrients, and sediment throughout the watershed. When functioning properly, these streams provide landscape hydrologic connections; stream energy dissipation during high-water flows to reduce erosion and improve water quality; surface and subsurface water storage and exchange; ground-water recharge and discharge; sediment transport, storage, and deposition to aid in floodplain maintenance and development; nutrient storage and cycling; wildlife habitat and migration corridors; support for vegetation communities to help stabilize stream banks and provide wildlife services; and water supply and water-quality filtering. They provide a wide array of ecological functions including forage, cover, nesting, and movement corridors for wildlife. Because of the relatively higher moisture content in arid and semi-arid region streams, vegetation and wildlife abundance and diversity in and near them is proportionally higher than in the surrounding uplands. In the rapidly developing southwest, land management decisions must employ a watershed-scale approach that addresses overall watershed function and water quality…Consideration of the cumulative impacts from anthropogenic uses on these streams is critical in watershed-based assessments and land management decisions to maintain overall watershed health and water quality."

Recently, land managers have noted dwindling fish populations in the San Pedro River, citing higher than normal water temperatures, lethal to some native fish, as one cause (Regional Monitoring Partnership meeting notes, 1/25/2007). Climate change may bring further changes to the flow, temperature, vegetation, and species distribution of the San Pedro River. These and other foreseeable impacts to intermittent, ephemeral or perennial waters and the watersheds they support must be analyzed in light of their impact on the ability or limitation of the landscape and wildlife to adapt to climate change, as well as the how such reasonably foreseeable changes will affect the livelihoods, economies and general availability, quantity, and quality of water of the residents of the areas impacted. The DEIS analysis is inadequate and does not

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1601	Response to Comment
26	Additional information regarding climate change has been added to Section 4.17.4.2 of the FEIS as follows. "With respect to the consequences for the climate of the Project area, federal and state land managers, scientists, stakeholders, and partners at an August 2010 workshop noted that climate change models for the southwestern deserts predict general warming and drying with increasing precipitation variability year to year, leading to increasing conflicts between competing water uses. Workshop attendees also agreed that increasing environmental stress is expected as a consequence of shifting ecosystem boundaries and species distributions, expansion of non-native species, and other potential effects leading to increasingly unstable biologic communities (Hughson et al. 2011). Record-setting wildfires are likely due to rising temperatures and related reductions in spring snowpack and soil moisture. Increased frequency and altered timing of flooding will increase risks to people, ecosystems, and infrastructure. Ozone pollution, which in many areas of the southwest increases as summer temperatures rise and clouds decrease, may also increase as a result of climate change. (US Global Change Research Program, 2012) More intense, longer-lasting heat waves will result in increasing demands for air-conditioning, depleting electrical generation and distribution capacity, resulting in increased risks of brownouts and blackouts. In addition, electricity supply will be affected by changes in the timing of river flows and where hydroelectric systems have limited storage capacity and reservoirs, since increased year-to-year variability of precipitation is expected. (US Global Change Research Program, 2012)"

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address the reasonably foreseeable circumstances of prolonged drought and climate change.

Our natural resources provide food and shelter, flood control, water filtration, clean air, fish and wildlife habitat, recreational opportunities, aesthetic benefits, jobs, and a higher quality of life for all. Science has demonstrated the importance of these natural resources to our daily lives. The adverse impacts of climate change may stress some natural resources and systems to the point that they may struggle to adapt and provide ecosystem services. It is necessary to maintain and improve the overall health of our natural resources in order to maintain them for the health, welfare, and enjoyment of present and future generations.

Habitat Fragmentation

Un-fragmented landscapes are key indicators developed by biologists in assessing the conservation value of regions and sites and the imminence of the threats they face (Baker, 2010). Large blocks of habitat have the potential to sustain viable species populations and they permit a broader range of species and ecosystem dynamics to persist. Studies have shown that even specialized species such as neo-tropical migrants are using the entire watershed, not just the "green ribbon" created by the lower San Pedro River Valley (LSPRWA, 2006).

Harvard's Richard Forman pioneered studies showing that roadway and infrastructure construction and maintenance fragments habitat and can adversely impact flora and fauna by interruption of wildlife movement and migration, clearing of native vegetation, increased human and vehicular traffic in the area of impact, introduction of invasive species, light and sound impacts, and negative edge effects.

It is well documented that transmission lines cause significant and direct mortality of raptors (Banks 1979, Klem 1979, Churcher and Lawton 1987) (United States Fish & Wildlife Service {USFWS} BO for Las Cienegas 10/4/2002, pg. 72). Also problematic for small birds, herps and mammals is that the transmission line will create a continuous linear swath, which will eventually total hundreds of miles in collective length, where the towers will serve as a giant hunting perch for raptors. Raptors may perch on the towers and pick off anything that flies across or runs out into the open, denuded area. The towers and denuded area together are a potentially lethal combination that will seriously impact both resident and migratory bird species. Eventually raptors will likely habituate to areas along the line where the highest concentrations and/or movements of birds, herps and small mammals occur and exploit the height of the towers and lack of cover, resulting in a higher concentration of raptors nesting close to the line.

There is a strong likelihood that the access and maintenance roads will become travel corridors for all-terrain off road vehicles resulting in significant disturbances to wildlife, spread of exotic invasive species, and habitat fragmentation. In *The State of the Desert Biome*, Nabhan and Holdsworth state, "...although once considered a non-consumptive use of the desert relative to mining, grazing and logging, recreation-related damage is now considered the second most pervasive impact upon threatened and endangered species in the Western United States (Rick Knight pers. Comm.) Off-road vehicle damage of vegetation, vandalism and illicit collecting of endangered plants - all incidentally associated with outdoor recreation - are collectively cited more frequently than any other pressures on threatened plants in the U.S./Mexico borderlands (Nabhan *et al.* 1989). In survey results of public land managers regarding the adverse impacts

1601	Response to Comment
27	The engineering requirements of 500kV systems eliminate the risk of electrocution for birds, through the required spacing between energized components and paths to ground. Raptor use of the Project, as hunting perches or nesting substrate, may occur. In many areas, existing natural perches and nest sites may be common. In areas lacking existing perches and nest sites, raptor deterrents may be considered if information indicates that raptor predation on species of concern would be facilitated. Raptor deterrents and other similar measures would be identified in the Avian Protection Plan. Vegetation management and reclamation would be designed to mitigate the negative effects of erosion and decreased cover in the right-of-way.

1601

27 of recreational use of natural resources, soil erosion was the most frequently cited negative impact, followed by frequency of disturbance of understory vegetation, fuel-wood harvesting, disruption of nesting birds and disturbance of other landscape features, including riparian vegetation and dunes" (Nabhan and Holdsworth 1998, pgs. 24–25).

The Arizona Wildlife Linkages Working Group, comprised of the Arizona Department of Transportation (ADOT) and the Arizona Game and Fish Department (AZGFD) in conjunction with the FHWA, BLM, USFS-Tonto National Forest, USFWS, Northern Arizona University, Sky Island Alliance, and the Wildlands Project, created the "Arizona Wildlife Linkages Assessment Document" http://environment.fhwa.dot.gov/integ/case_arizona.asp. The practice of clearing the transmission corridors of all vegetation for fire suppression and transmission line maintenance will result in even more fragmentation of the lower San Pedro River Valley and its tributaries, adversely impacting crucial wildlife movement corridors and connectivity between the Rincon and Catalina Mountain portions of the Coronado National Forest with the Galiuro Wilderness, Aravaipa Canyon and the Santa Teresa Mountains. Potentially impacted linkages are numbers 78, 79, 80, 81, 82, 83, 84, 88, 89, and 90, http://www.azdot.gov/Highways/OES/AZ_WildLife_Linkages/map.asp excerpted below.

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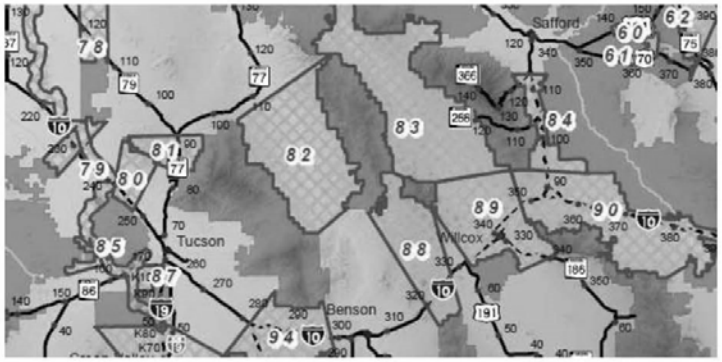
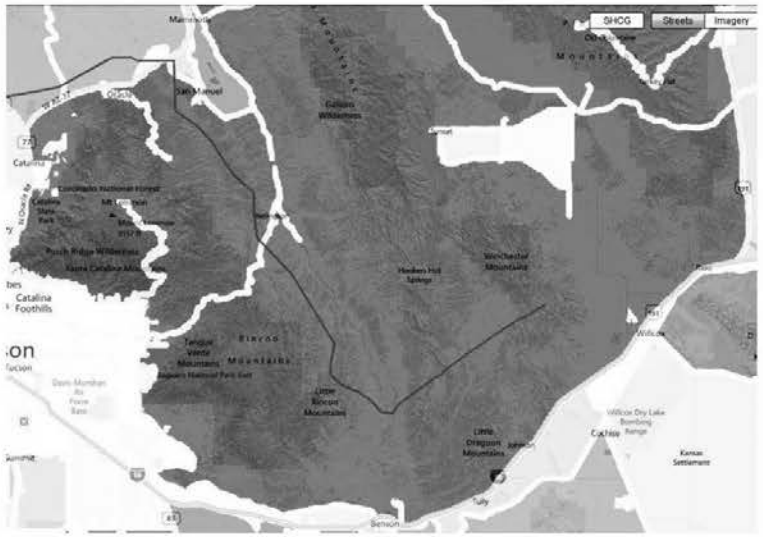


Siobhan Nordhaugen
Copyright 2006 (c) by the Arizona Wildlife Linkages Workgroup

The **Arizona Wildlife Linkages Assessment Document** includes a detailed written description of each linkage and the species associated with each one. The 2008 Western Governors Association Wildlife Corridors and Crucial Habitat Initiative (http://www.westgov.org/index.php?option=com_content&view=article&id=123&Itemid=68) incorporated the initial work of the Arizona Wildlife Linkages Working Group. AZGFD is continuing the refinement of the original report on a county by county basis, completing more detailed assessment reports for Pinal and Pima Counties and currently developing a more detailed assessment of Cochise County.

1601	Response to Comment
28	As discussed in the DEIS (Section 4.6.5), locations where tall or dense vegetation is present and would require management over the life of the Project are a very small portion of any alternative, typically at river crossings and ephemeral streams. Where possible, design and structure siting would minimize the need for vegetation management.

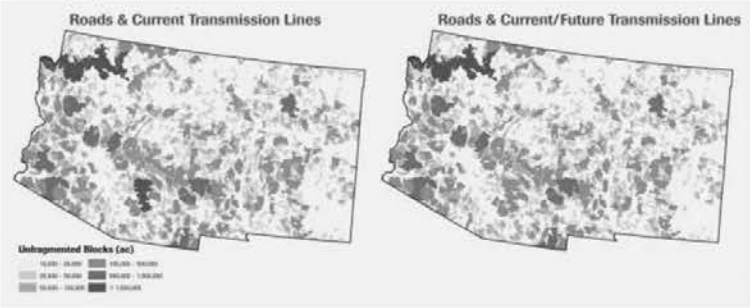
The AZGFD map of fragmentation in Arizona, available from http://www.habimap.org/habimap, is shown below. The darker the blue, the less habitat fragmentation. The lower San Pedro watershed/Aravaipa- Galiuro-Santa Teresa region remains the second least fragmented landscape in Arizona, surpassed only by the Grand Canyon area.



Courtesy of CWG. A detailed view showing the SunZia preferred alternative in the San Pedro Valley superimposed on the Arizona Game and Fish Department's fragmentation map for Arizona.

1601

TNC's June 18th, 2012 map illustrating levels of fragmentation of habitat in New Mexico and Arizona tells a tale. TNC states, "The graphic below compares the baseline condition to the future scenario. The largest remaining habitat blocks are indicated by progressively darker shades of green… The graphic to the right illustrates the change in size of this habitat block from the proposed Sunzia line."



TNC's cumulative effects analysis (appended) found that this wild land complex is second only to the Grand Canyon region in the Southwest in terms of its size and relative intactness. The TNC cumulative impacts analysis states:

> "The take home from these analyses is that the Sunzia transmission route proposed to cross the Galiuro-Aravaipa-Santa Teresa area would split in half the second largest unfragmented landscape remaining in the southwestern U.S. and introduce habitat disturbance into an area where, for example, there are no paved roads and no roads that cross over the axis of the Galiuros from Aravaipa Valley to the San Pedro River Valley, or from Aravaipa Valley over the Santa Teresas into the Gila River Valley. With the Southwest's largest remaining intact area, the Grand Canyon, already in protected status, ***it raises the question of whether mitigation measures are even possible for disturbances to the region's second largest intact landscape***" (emphasis added).

In their scoping comments, TNC stated,

> "Over the last three decades The Nature Conservancy and many other agencies and organizations have been working steadily to protect the Lower San Pedro Basin. This area has become a focal point for conservation and mitigation investments because of the opportunity to protect and restore a relatively undisturbed river system, cross-valley wildlife movement, and ecological processes such as fire that maintain ecosystem health. Partners in this effort include the Bureau of Land Management, Bureau of Reclamation, Salt River Project, Arizona Game and Fish Department, Pima County and a number of private landowners. The Resolution Copper Company has offered to protect

1601	Response to Comment
	See following page(s)

additional lands in the valley through its proposed land exchange for a mine site in Superior. Together, these partners have protected close to 40,000 acres and invested over $25 million in acquisition of conservation lands and appurtenant water rights. Close to one third of the lower river corridor is now in protected status, and stream flow and habitat conditions are improving."

Duncan and Slagle (2004) describe the San Pedro River as one of the most significant perennial undammed desert rivers in the United States, providing important habitat for almost 400 species of migratory birds, 80 species of mammals, and 40 species of reptiles and amphibians.

29 We can't help but conclude that the best available science mandates that we keep habitat and landscape level ecosystem functions as unfragmented as possible in the Galiuro-Aravaipa-Santa Teresa area, the lower San Pedro River Valley watershed, the Sulphur Springs Valley and the Willcox Playa area, for local, regional and hemispheric resident and migratory wildlife populations, unique habitats, resilience and ecosystem services. The DEIS analysis is fatally flawed and inadequate when addressing these issues. The No Action Alternative is the only reasonable option.

Soil Stability, Invasive Species & Changing Fire Regimes

30 Erosion and damage to highly erodible soils is likely given the potential impacts associated with miles of new roads and other construction related activities. According to the Redington NRCD's own plan, http://redingtonnrcd.org/attachments/Long_range_plan_20102016.pdf,

> "sediment pollution of streams and erosion of rangeland is a major problem in the district. Roads associated with recreation and utility construction/maintenance were the major source of erosion in the district and the number one cause of human-related gully erosion… The Natural Resource Conservation Service describes the erosion hazard for the Stagecoach, Sonoran and Pinaleno soils, which make up 85% of the area, as severe which indicates that significant erosion is expected. The numerical rating is .95 where 1.00 has the greatest negative impact… Excessive erosion from roads can overwhelm a river's capacity to process sediment. Cross-country road construction increases unauthorized access to off-road vehicles. The clearing of vegetation and associated soil compaction from these roads counter the re-vegetation and rangeland improvement efforts currently taking place in the district (Baker, 2010)."

31 Soil disturbance associated with access roads associated with design, construction and maintenance activities can potentially result in adverse water quality impacts. Sheet flow may form in these areas, leading to soil erosion and other damage to surrounding soils. Soil erosion and sedimentation can clog streams and threaten aquatic life. Removal of the tree canopy along stream crossings can increase water temperature, algal growth, dissolved oxygen depletion, and cause adverse impacts to aquatic biota.

1601	Response to Comment
29	The conclusion of the analysis in the DEIS is that mitigation measures could be effectively implemented to minimize the potential for habitat fragmentation in these areas. For example, SE 4, 5, 6 and 8 would reduce the disturbance caused by access road construction and avoid sensitive features.
30	Standard and selective mitigation measures along with proper roadway engineering BMP's would be implemented. Proper road design measures would include landform conformance, water bars placed across the roadway, and erosion control measures. Conforming roadways as close to the natural landform as possible limits surface flow and capture down the road surface leading to increased stability of the roadway surface and general disturbance of the land surface. Water bars in the roadway limit surface flow on the roadway and disperse surface flow intermittently along the roadway rather than at limited points along the roadway. Furthermore, revegetation and reclamation plans would be implemented and would result in limited soil compaction, accelerated erosion, and impacts to in-progress rangeland improvements. Selective mitigation measures for limiting access to roads used for construction (e.g., SE 4) would be implemented in order to minimize unauthorized OHV use and associated impacts.
31	The DEIS notes that removal of riparian vegetation would have a negative effect on terrestrial and aquatic habitat, as reflected in the impact analysis for vegetation and discussed throughout Section 4.6 for individual special-status species. Design and structure siting would minimize the need for vegetation management. Vegetation management methods, including the selection of mechanical vs. chemical treatments, frequency, selection and application of approved herbicides (if chemical treatment is used), would be detailed in the final Vegetation Management Plan.

Courtesy of CWG. Clear-cutting of riparian vegetation across the San Pedro River beneath the double 345-kV lines that connect Tucson Electric Power Company's Springerville generating station with Tucson shown 0.65 miles north of the crossing of the SunZia preferred alternative.

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Improper use of herbicides to control vegetation could result in runoff to streams with negative impacts on water quality and aquatic life. Construction and maintenance of roads associated with the proposed project can result in permanent loss of all habitats in the developed area, disruption of animal movement and dispersal, and creation of a continual disturbance that affects animal communities in the adjacent fragmented portions of their habitats throughout the life of the project. These linear impacts can become a vector for exotic invasive species, fire, and illegal activities such as drug smuggling.

Fire is a very real and significant threat in the arid southwest desert uplands and grasslands, especially so with the rapidly expanding invasion of the exotic invasive species, especially African buffelgrass, (*Pennisetum ciliaris*).

> "The cattle-related introduction and intentional sowing of African grasses in the Sonoran bioregion has not only affected the biotic composition of semidesert grasslands, but has profoundly changed vegetation structure, fire intensity and frequencies and migratory wildlife corridors within several subregions of the Sonoran Desert proper." (Nabhan and Holdsworth 1998, p2)

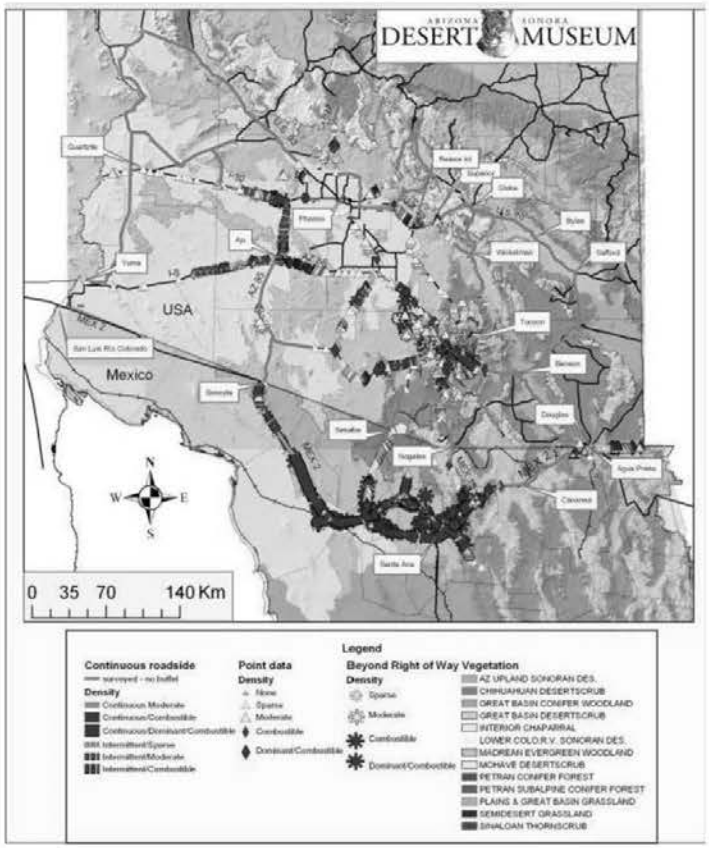
Van Devender and Dimmit (2000) state that the introduction of buffelgrass into fire-intolerant desert communities results in a permanent conversion to a buffelgrass savanna with reduced plant cover and diversity. In some cases the conversion to buffelgrass has been so complete

31

that consequences are irreversible in the short term (Burquez *et al.* 1998, pg.21). Van Devender and Dimmit (2006) state that buffelgrass is

> "the most serious ecological threat to the Palo Verde-Saguaro-Ironwood desert scrub in the Arizona Upland (AZU) subdivision of the Sonoran Desert" and that, "in time, buffelgrass fires could convert the Arizona Upland into a savanna-like landscape as Saguaro (*Carnegiea gigantea*), Foothill Palo Verde (*Parkinsonia microphylla*), Ironwood (*Olneya tesota*), Organ Pipe Cactus (*Stenocereus thurberi*), etc. are killed".

Buffelgrass invasion of grasslands and columnar cacti of the Sonoran desert biome result in unnatural fire regimes, as documented by a May 28, 2008 controlled burn of 160 acres of buffelgrass invaded land owned by the City of Tucson, in the Avra Valley. University of Arizona researcher Chris McDonald and local firefighters expressed surprise at the "extreme" fire behavior that burned at 1700 degrees and moved at approximately the speed of the wind over a relatively flat terrain. Many desert trees, shrubs, and cacti, including saguaros, are not fire adapted and cannot withstand fires.



Map depicting buffelgrass distribution along roadways of southern Arizona and northern Sonora, Mexico. Source: Van Devender and Dimmit 2006

Other problematic invasive species include but are not limited to Blue Panic (*Panicum antidotale*, a Federal Noxious Weed), Bermuda Grass (*Cynodon dactylon*), Sahara Mustard (*Brassica tournefortii*), another African grass, Lehman's Lovegrass (*Eragrostis lehmanniana*), Saltcedar (*Tamarix ramosissima* and closely related species), Russian Olive *(Elaeagnus angustifolia)*, Giant Reed (*Arundo donax*), and invasive shrubs such as mesquite (*Prosopis*

spp). Exotic species that are of greatest management concern are those that are highly invasive and that strongly modify their environment. Table 1 of Appendix H - Exotic Plant Species in Riparian Ecosystems of the US Southwest, from the 2002 Southwestern Willow Flycatcher Recovery Plan, has extensive information on invasive species of concern to riparian areas inhabited by the Southwestern Willow Flycatcher, including the San Pedro River and its tributaries.

As the conversion of native to non-native plant communities is primarily a human-facilitated issue, and because many current fires are human-caused, the issue of fire in an environment of increasingly fragmented landscapes which facilitates invasive non-native plant communities is a legitimate threat to public health and safety and the survival of our ecosystem in general.

Riparian Habitat

TAS is engaged in wildlife and conservation issues and focuses on research, education, advocacy, recreation, and conservation through habitat protection and restoration, with specific emphasis on the importance of riparian systems to resident and migratory species, especially birds, in the arid southwest.

Southwestern riparian habitats, the lush ribbons of vegetation running along our streams and rivers, contain the highest density and diversity of bird species outside tropical rain forests. Habitats along watercourses are known for their high density and diversity of animal species. Yet as early as the November 1988 issue of *Wildlife Views*, the AZGFD stated that 90 percent of the Arizona's riparian habitat had been lost.

The **Arizona Department of Environmental Quality** (ADEQ), pursuant to A.C.C. R18-11-112, has designated "**unique waters**" or "**Outstanding Arizona Waters**" as having exceptional recreational or ecological significance and/or providing habitat for threatened or endangered species. Designations include **Aravaipa Creek** from its confluence with Stowe Gulch to the downstream boundary of Aravaipa Canyon Wilderness Area (Aravaipa Canyon and lower San Pedro basins) and **Buehman Canyon Creek** from its headwaters to approximately 9.8 miles downstream (lower San Pedro basin).

The **American Bird Conservancy**'s report on the "***Top Twenty Most Threatened Bird Habitats in the United States***" lists **Southwestern Riparian Habitat** as the **fifth most threatened in the nation**. This increasingly rare habitat type, epitomized by the Lower San Pedro River watershed, is described as occupying only a tiny fraction of the land area while supporting the largest concentrations of animal and plant life, and the majority of species diversity in the desert southwest, a designated "hotspot" of biological diversity. The report states "The scarcity of water in the Southwest makes rivers and streams particularly important for sustaining the region's communities. This dependence places a severe strain on natural ecosystems. Achieving riparian habitat conservation depends on public agency buy-in to broad-scale land management plans and the successful provision of incentives to private property owners to restore their degraded land. Riparian areas take time to recover... Currently, though, efforts to restore riparian areas are being considerably outpaced by the rate at which they are being lost, making these vibrant ecosystems an ever-rarer feature of the Southwest." http://www.abcbirds.org/newsandreports/habitatreport.pdf.

The **Arizona Partners in Flight *Bird Conservation Plan*** states, "Riparian woodlands comprise a very limited geographical area that is entirely disproportionate to their landscape importance, recreational value, and immense biological interest (Lowe and Brown 1973). It has been estimated that only 1% of the western United States historically constituted this habitat type, and that 95% of the historic total has been altered or destroyed in the past 100 years (Krueper 1993, 1996)... Riparian woodlands are among the most severely threatened habitats within Arizona.... Maintenance of existing patches of this habitat, and restoration of mature riparian deciduous forests should be among the top conservation priorities in the state". http://www.azgfd.gov/pdfs/w_c/partners_flight/APIF%20Conservation%20Plan.1999.Final.pdf.

Riparian woodlands in the desert southwest are an extremely important resource because they constitute less than one percent of the desert landscape, yet typically support more than fifty percent of the breeding birds. Indeed, the positive effects of even a degraded riparian area in central Arizona extend up to one km into the adjacent uplands (Szaro and Jakle 1985). Riparian woodlands also provide shelter and critical food resources for dozens of species of migratory birds that stop in these woodlands during their spring and fall migrations. From 2006 – 2008, **Kirkpatrick *et al*** found that riparian areas contained 68 percent more species and 75 percent more individual birds compared to adjacent uplands, with this pattern holding true for both the breeding and non-breeding bird communities. They believe:

> "First, should long-term drought conditions persist and/or ground water levels fall to the point where surface water flows are reduced or eliminated, populations of breeding (e.g., Black Phoebe, Common Yellowthroat, Yellow Warbler, Song Sparrow, and Lesser Goldfinch) and migrant (e.g., Yellow-rumped Warbler and Wilson's Warbler) species are likely to decline. Second, should long-term drought conditions persist and/or ground water levels fall to the point that riparian vegetation is negatively affected, populations of breeding species such as Bell's Vireos, Yellow Warblers, and others are likely to decline... Three species that inhabit low-elevation riparian woodland are considered Arizona PIF priority species: Southwestern Willow Flycatcher (*Empidonax traillii extremus*), Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*), and Lucy's Warbler (*Vermivora luciae*). The Southwestern Willow Flycatcher and the Western Yellow-billed Cuckoo are considered wildlife of special concern in Arizona... and are federally listed as endangered and candidate species, respectively (Federal Register 1996)... An additional 8 species that inhabit low-elevation riparian woodland are considered Arizona PIF preliminary priority species: Brown-crested Flycatcher (*Myiarchus tyrannulus*), Northern Beardless-tyrannulet (*Camptostoma imberbe*), Bell's Vireo (*Vireo bellii*), Yellow Warbler (*Dendroica petechia*), Rufous-winged Sparrow (*Aimophila carpalis*), Abert's Towhee (*Pipilo aberti*), and Summer Tanager (*Piranga rubra*)."

Some 80 percent of vertebrate species in the arid southwest region are dependent on riparian areas for at least part of their life cycle; over half of these cannot survive without access to riparian areas (Noss and Peters 1995). Arizona and New Mexico have lost 90 percent of pre-settlement riparian ecosystems (Fig 3e, Noss et al. 1995). TNC lists the Fremont cottonwood-Gooding willow riparian community as highly imperiled. In Arizona and New Mexico, more than

100 federally and state listed species are associated with cottonwood-willow bosques (Noss and Peters 1995).

Among U.S. Federal Register notices listing plants and animals as endangered species, water impoundment and diversion are among the most frequently cited threats mentioned. Inundating vegetation in reservoirs behind dams and changes in river flow are among the most severe pressures on threatened plants and nesting birds in the US/Mexico borderlands. The regional decline of 36 of the 82 breeding bird species which formerly used riparian woodlands is a case in point. In combination with water diversion, groundwater pumping has affected nearly all river valleys in Arizona's portion of the Sonoran Desert. In the heart of agricultural areas, groundwater overuse has been most precipitous, leading to ground subsidence, salinization and the demise of riparian forests (Nabhan and Holdsworth 1998, pg. 2).

However, according to **Webb, Leake, & Turner** (2007, ***The Ribbon of Green***, Tucson: U. of A. Press, pg. 223), "Riparian vegetation has generally increased along the [San Pedro] river north of the U.S.-Mexico border.... [and] closely follows the alternating pattern of perennial-ephemeral flow that characterizes this watercourse along its greater than 150-mile length in Arizona " Moreover, "...the case of riparian vegetation change on the San Pedro River represents one of the largest increases in woody riparian vegetation in the Southwest. Many researchers have noted that this river, once swampy, now sustains a verdant forest."

In the majority of the Sonoran desert, only remnant fragments of mesquite bosques remain and restoration is hampered by rail, roadway, and utility infrastructure, as well as commercial, residential, agricultural, and recreational development. The lower San Pedro is the exception.

32

Under Executive Order 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigation should occur to ensure no net loss of wetlands functions and values. BLM best management practices (BMPs) for wetlands must be used during construction, upgrades, and rebuilding of any proposed transmission lines and towers and support structures for transmission lines must be located outside the limits of the 100-year floodplain consistent with Executive Order 11988 on Floodplains. Construction and maintenance, not to mention public access and use, associated with placement and maintenance of a transmission line in or adjacent to riparian areas will degrade watershed hydro-geological processes and habitat in resources already imperiled by a decadal, if not historic, drought and climate change.

Therefore, it should not be surprising that we have grave concerns regarding the proposal to locate any portion of the transmission line within, or adjacent to, any riparian area, especially the San Pedro River Valley and its environs. Thus, we have consistently and strongly advocated complete avoidance of the valley and its tributaries, such as Aravaipa Creek.

Aravaipa Creek

Aravaipa Canyon and the Galiuro Mountains are at the heart of one of the wildest and most intact wilderness complexes in the Southwestern United States. Adjacent to the two designated wilderness areas are contiguous roadless public lands that have been identified by the Arizona Wilderness Coalition's Citizens' wilderness inventory as suitable for wilderness designation.

1601

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1601	Response to Comment
32	The riparian area has been identified within the San Pedro River Valley; impacts are described in Section 4.6.4.2 of the DEIS, and mitigation measures (e.g., SE 8 – allow conductors to span sensitive features) would be effective to minimize disturbance to riparian areas. Similarly mitigation measures would be used at the Aravaipa Creek crossing.

1601

The Aravaipa Canyon Wilderness Area has nine side canyons and is surrounded by tablelands. Administered by the BLM, it was designated in 1984 and includes 19,700 acres along the 11-mile long central gorge of the canyon, which cuts through the northern end of the Galiuro Mountains. TNC's Aravaipa Canyon Preserve, consisting of about 7,000 acres, includes lands at both the east and west ends of Aravaipa Canyon as well as lands on the canyon's south rim (TNC, 2006). In 2007, the 1,250-acre Cobra Ranch near the east end of the canyon was donated to the TNC. Cobra Ranch contains Stowe Gulch, a drainage area estimated to contribute nearly half of the groundwater flowing to the headwaters of Aravaipa Creek (TNC, 2007).

According to TNC,

> "The Galiuro-Aravaipa-Santa Teresa area encompasses over 100,000 acres of intact, high value wildlife habitat. The area maintains the full complement of wildlife from large mammals (mountain lion, black bear, bighorn sheep, mule deer, white-tailed deer), to highly limited species such as Gould's turkey and the threatened Mexican spotted owl. The Aravaipa area, alone, includes over 500 species of plants and birds, 45 mammals, and 67 amphibians and reptiles. The streams on the Muleshoe Ranch and Aravaipa Canyon are the best refugia remaining for the states' imperiled native fish species. The abundance of the area's bighorn sheep population has enabled the Game and Fish Department to transplant."

A new development corridor would be detrimental to the security and integrity of outstanding wildlife habitat in this wild land complex.

33

The perennial flow of Aravaipa Creek links three mountain ranges, three wilderness areas and maintains migratory corridors for both large mammals and birds, making it a crucial component to maintaining biodiversity and ecological integrity in southeastern Arizona. Aravaipa Creek is a major tributary to the lower San Pedro River and contains an intact native fish assemblage, including the endangered Spikedace (*Meda fulgida*) and Loach Minnow (*Tiaroga cobitis*). The presence of a robust population of these fishes in Aravaipa Creek, and the largely unregulated hydrology of its waters, led to a 46.1-mile reach of Aravaipa Creek and its upper tributaries – Deer Creek and Turkey Creek - being designated as Spikedace critical habitat. Similarly, critical habitat for these species exists within Hot Springs Canyon (5.8 miles plus 3.4 additional miles within Bass Canyon, an upper tributary) and in Redfield Canyon (4.0 miles). Hot Springs and Redfield Canyons are also tributaries to the lower San Pedro River near Cascabel. The DEIS fails to adequately analyze impacts to these areas and resources.

The August 28th, 2009 scoping comments by SIA, the CSDP and others state:

> "Three Areas of Critical Environmental Concern (ACEC) lie within the Aravaipa Canyon Watershed Management area including Turkey Creek, Table Mountain and Desert Grasslands. Table Mountain and Desert Grasslands are also designated as Research Natural Areas (RNA). Areas of Critical Environmental concern are defined by the BLM to be areas where "special management attention is required to protect and prevent irreparable damage to public land and/or related waters containing resources, values,

1601	Response to Comment
33	Comment noted. Please also see response to Comment No. 32. The BLM Preferred Alternative would not affect Aravaipa Creek, Hot Springs Canyon or Redfield Canyon.

systems, processes, or hazards identified, designated, and protected through the land-use planning process." These areas must have significant cultural, scenic value; fish or wildlife resources; or other natural processes or systems, and must have substantial significance or value. This requires qualities of more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern. Research Natural Areas are areas that contain important ecological and scientific values and are managed for minimum human disturbance. They are primarily used for non-manipulative research and baseline data gathering on relatively unaltered community types. They make excellent controls for similar communities that are being actively managed.

The Turkey Creek ACEC consists of 2,326 acres that adjoins a portion of the Aravaipa Canyon Wilderness at its southeast end and contains two riparian woodlands. The area has significant cultural and scenic values and is an important wildlife resource and riparian area. The area is threatened by off road vehicle (ORV) use, unregulated camping and current and potential resource extraction.

The Table Mountain ACEC contains two plant communities of concern. These include an Alligator Juniper savanna at the top of Table Mountain that exists in less than 20 locations and a white oak woodland containing Mexican Blue Oak in the adjoining Sycamore and Saddle Canyons. The total area encompasses 1,220 acres to the south of the canyon and of concern in this area is ORV use, prescribed fire and preventing mineral withdrawal and vegetation impacts.

The Desert Grasslands ACEC is significant due to its relict desert grasslands which are an important baseline for management objectives. Desert grasslands are widely used for the majority of grazing in the desert southwest but also provide critical habitat for 13 state-listed wildlife species and are important for watershed stabilization. The retention of undisturbed tracts of relict desert grasslands is of value to BLM management and scientific research (BLM, 1991). The Desert Grasslands area is greatly threatened by ORV use, livestock grazing, and could benefit from a prescribed fire plan. It consists of 840 acres with three areas of undisturbed desert grasslands on two different soil types."

Special Status Species in the Aravaipa Canyon Watershed are listed below.

COMMON NAME	SCIENTIFIC NAME	STATUS
Allen's Big-eared Bat	*Idionycteris phyllotis*	S
American Peregrine Falcon	*Falco peregrinus anatum*	SC, WC
Aravaipa Sage	*Salvia amissa*	S
Aravaipa Wood Fern	*Thelypteris puberula var. sonorensis*	S
Arizona Giant Sedge	*Carex spissa* var. *ultra*	S
Bald Eagle	*Haliaeetus leucocephalus*	LT, WC
Belted Kingfisher	*Ceryle alcyon*	WC

Black-bellied Whistling-duck	*Dendrocygna autumnalis*	WC
Buff-collared Nightjar	*Camprimulgus ridgwayi*	S
Catalina Beardtongue	*Penstemon discolor*	HS
Cave Myotis	*Myotis velifer*	S
Common Black Hawk	*Buteogallus anthracinus*	WC
Desert Sucker	*Catostomus clarki*	S
Fringed Myotis	*Myotis thysanodes*	S
Gila Chub	*Gila intermedia*	WC
Gila Topminnow	*Poeciliopsis occidentalis*	LE, WC
Loach Minnow	*Tiaroga cobitis*	LT, WC
Longfin Dace	*Agosia chrysogaster*	S
Lowland Leopard Frog	*Rana yavapaiensis*	WC
Mexican Spotted Owl	*Strix occidentalis lucida*	LT, WC
Northern Goshawk	*Accipiter gentilis*	WC
Northern Gray Hawk	*Asturina nitida maxima*	WC, S
Roundtail Chub	*Gila robusta*	WC
San Carlos Wild-Buckwheat	*Eriogonum capillare*	SR
Sonora Sucker	*Catostomus insignis*	S
Sonoran Desert Tortoise	*Gopherus agassizii*	LT, WC
Speckled Dace	*Rhinichthys osculus*	S
Spikedace	*Meda fulgida*	LT, WC
Toumey Agave	*Agave toumeyana* var *bella*	SR
Western Red Bat	*Lasiurus blossevillii*	WC
Western Yellow-billed Cuckoo	*Coccyzus americanus occidentalis*	WC

LE – Listed Endangered under the Endangered Species Act
LT – Listed Threatened under the Endangered Species Act
WC – Wildlife of Special Concern in Arizona
S – BLM Sensitive
HS – Arizona Native Plant Law Highly Safeguarded
SR – Arizona Native Plant Law Salvage Restricted

Key Ecological Attributes of the Lower San Pedro River Valley

The San Pedro River originates in Sonora, Mexico and flows northward for approximately 100 miles to its confluence with the Gila River near the Town of Winkelman, Arizona. It is the last major undammed river in the American Southwest, and exhibits a remarkably intact riparian system including extensive stands of Fremont cottonwood (*Populus fremontii*)/ Goodding's willow (*Salix gooddingii*) gallery forest and large mesquite (*Prosopis velutina*) bosques. Duncan and Slagle (2004) describe the San Pedro River as one of the most significant perennial undammed desert rivers in the United States.

An approximately 40-mile reach of the upper San Pedro River between the International Boundary and St. David is encompassed by the BLM's San Pedro Riparian National Conservation Area (RNCA), one of only two RNCAs in the nation. The San Pedro RNCA was designated in order to protect the "...unique riparian area and the aquatic, wildlife, archeological, paleontological, scientific, cultural, educational, and recreational resources of the public lands surrounding the San Pedro River."

In special recognition of the San Pedro RNCA's extraordinary avian diversity, it was designated North America's first Globally Important Bird Area in 1996. A Monitoring Avian Productivity and Survivorship (MAPS) bird banding and research site has been established on the San Pedro RNCA. The Arizona Important Bird Area program has applied for current Global IBA status for the SPRNCA IBA for the high concentrations of the Bell's Vireo, a Global qualifying species.

The San Pedro River serves as a corridor between the Sky Islands of the Madrean Archipelago in northern Sonora and southern Arizona in its southernmost reaches and, in the north, Arizona's Central Highlands. The river is not only a major corridor between varied habitat types and ecoregions; it represents a ribbon of water and riparian vegetation in an otherwise arid environment. The river thus exhibits a remarkably high biodiversity, both in resident and migratory species.

More than 100 species of breeding birds and another approximately 250 species of migrant and wintering birds occur in the area, representing roughly half the number of known breeding species in North America. The San Pedro River serves as a migratory corridor for an estimated 4 million migrating birds each year.

Notably, 36 species of raptors, including the Gray Hawk (*Asturina nititda* = *Buteo nitidus*), Mississippi Kite (*Ictinia mississippiensis*), Common Black Hawk (*Buteogallus anthracinus*), and Zone-tailed Hawk (*Buteo albonotatus*) can be found within the San Pedro River watershed. The San Pedro RNCA is thought to support 40 percent of the nesting Gray Hawks in the United States. The lower San Pedro River, like the upper reaches, also supports appreciable numbers of nesting Western Yellow-billed Cuckoos (*Coccyzus americanus occidentalis*), currently a candidate for Federal listing as a threatened or endangered species. Direct loss and degradation of low-elevation riparian woodland habitats have been cited as the primary causes for the declines in the Distinct Population Segment (DPS) of Yellow-billed Cuckoos in the western portion of their range. http://www.fs.fed.us/r2/projects/scp/assessments/yellowbilledcuckoo.pdf The abundance of mammals, reptiles, and amphibians is also high; over 80 species of the former and more than 40 species of the latter. Fourteen species of native fish formerly occurred in the San Pedro

River; two persist today. The upper reaches of the San Pedro River and its watershed also support populations of the endangered Huachuca water umbel (*Lilaeopsis schaffneriana* var. *recurva*), a semi-aquatic plant.

Investigations conducted in the 1940s and 1970s documented between 95 and 111 bird species solely within the approximately 3500 acre mesquite bosque currently owned by BHP-Billiton (Arnold 1940, Gavin and Sowls 1975). Surveys conducted by TAS on the BHP-Billiton property from 2006 to 2012 have documented 148 species (www.aziba.org). The lower reaches of the San Pedro River are currently subject to intensive survey efforts, largely conducted by AZGFD biologists, for the endangered Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Its mission to control insects in riparian areas is an essential function benefiting people as well as plant life.

River and stream impoundments, ground water pumping, and overuse of riparian areas have altered up to 90 percent of the Flycatcher's historical habitat. The aforementioned survey effort has shown the reach between Three Links and the Gila River confluence to be densely occupied by Southwestern Willow Flycatchers. Indeed, in 2005, the most-recent year for which complete survey data have been summarized, the reach thus described contained 164 Southwestern Willow Flycatcher territories consisting of 307 adult birds (English *et al.* 2008). These lower reaches thus contain over 99 percent of the Southwestern Willow Flycatcher territories on the entire San Pedro River within the United States. The San Pedro RNCA hosted the remaining less than one percent of the territories (one) and adults (a single pair). It must be noted that the middle reaches of the river, between St. David and Three Links, are largely unsurveyed due to limited habitat and poor access to private lands. Few to no surveys have been conducted in Sonora.

The high importance of the lower San Pedro River for the recovery of the Southwestern Willow Flycatcher contributed to its designation as critical habitat for the species. The current critical habitat includes approximately 60 river miles of the lower San Pedro River between a point approximately 3.5 river miles south of Hot Springs Canyon to the Gila River confluence. In 2011, the U.S. Fish and Wildlife Service proposed to redesignate (and increase the length of) **Southwestern Willow Flycatcher critical habitat** over a 79 mile reach of the lower San Pedro River.

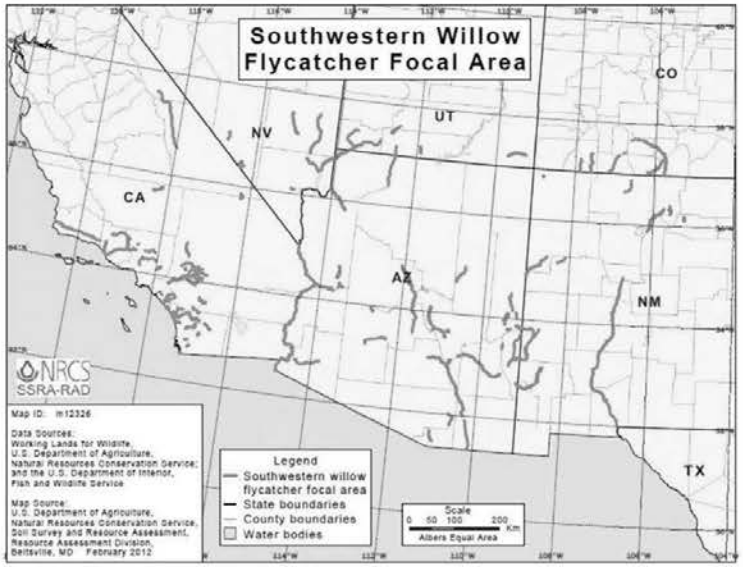
The protection of riparian resources and the desire to provide flood protection and plentiful clean drinking water to the residents of the Phoenix valley and others is what originally prompted the SRP, a utility, and the BOR to purchase and conserve federally required mitigation lands along the lower San Pedro River. These lands are encumbered by easements and are specifically managed, under the Roosevelt HCP, to conserve Southwestern Willow Flycatchers and mitigate for the impacts of the rising waters associated with the construction of the Roosevelt Dam and flooding territories there. The BLM and the BOR own disjunct parcels within the reach. TNC and the BLM also own and co-manage lands within the Aravaipa Canyon and Muleshoe Ecosystem Management Areas, both located on major tributaries to the lower San Pedro River.

TNC has identified the San Pedro River as "One of the Last Great Places".

TNC is working with the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program to restore an artesian spring-fed Cienega (wetland) and reestablish endangered Gila Topminnow (*Poeciliopsis occidentalis occidentalis*) and Lowland Leopard Frog (*Rana yavapaiensis*) on the 7B Ranch.

The Department of Interior's **American Great Outdoors (AGO) Initiative** http://americasgreatoutdoors.gov/ will focus on the three areas in the desert borderlands: the Malpais Borderlands, the Upper San Pedro River, and the Lower San Pedro River. The AGO Initiative operates from the premise that protection of our natural heritage is a non-partisan objective shared by all Americans. It turns to communities for local, grassroots conservation initiatives that also promote recreational opportunities which support sustainable economies based on working landscapes, cultural and historic heritage and ecotourism.

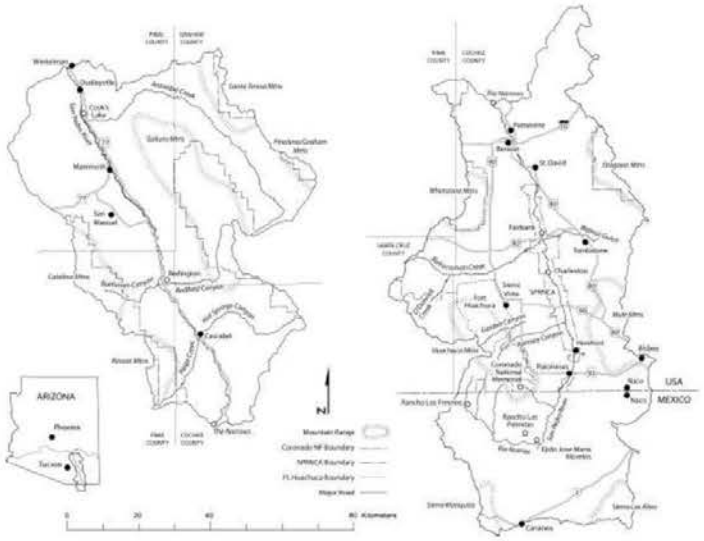
The Department of Agriculture's (USDA) Natural Resource Conservation Districts (NRCDs) and the USFWS have revealed their new **Working Lands for Wildlife Habitat Initiative** www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/whip/?&cid=stelprdb1046975 which, in Arizona, will focus' on cooperative efforts to assist ranchers and farmers in preserving their heritage and way of life while strengthening rural economies and conserving the federally endangered Southwestern Willow Flycatcher (*Empidonax traillii extimus*), a small Neotropical migratory bird that breeds in the arid southwestern United States. http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/financial/whip/?&cid=stelprdb1047041 Arizona recognizes it as a "species of greatest conservation need." It was listed as endangered under the Endangered Species Act (ESA) on February 17th, 1995. The ESA, sec. 3, defines critical habitat as--(i) the specific areas...on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management consideration or protection (and; (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon determination that such areas are essential for the conservation of the species. The Working Lands for Wildlife Initiative will prioritize $33 million in restoration actions on a large regional scale to offer financial and technical assistance to farmers, ranchers and forest landowners to restore and protect targeted habitats and most cost effectively focus assistance.



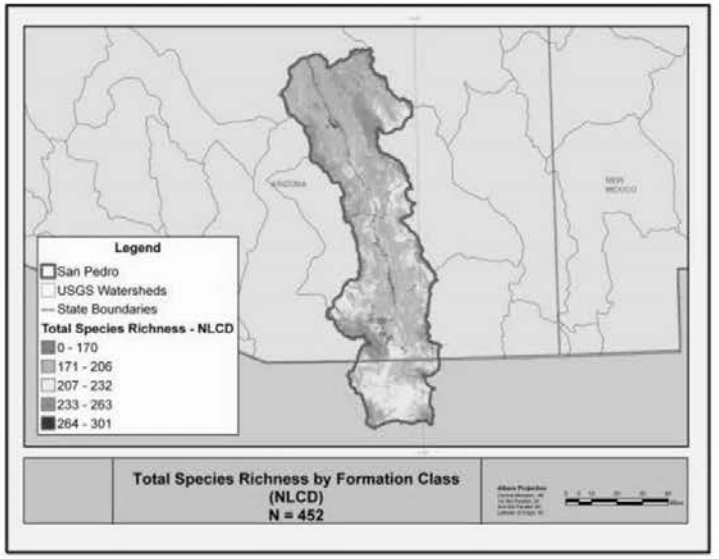
The destruction of tropical rain forests where the flycatcher winters makes the conservation of breeding habitats in the southwest United States even more urgent. Interestingly enough, the survival of riparian ecosystems may depend on the flycatcher as well. "Studies have shown that predation on insects by birds actually results in the improved health of trees and forests," according to Bill Howe, nongame migratory bird coordinator for the Fish and Wildlife Service's Southwest Region. "The Southwestern Willow Flycatcher and other insectivorous birds in riparian woodlands consume huge numbers of insects per day, including mass quantities of mosquitoes." http://www.fws.gov/southwest/es/arizona/Documents/SpeciesDocs/SWWF/SWWFC.pdf The San Pedro Watershed's ecosystem services are extraordinary and offer tremendous biodiversity at the confluence of four different ecosystems.

Scientists from the Environmental Protection Agency (EPA), the New Mexico State University (NMSU) and others have recently modeled the San Pedro River watershed as one of only two test areas in the nation, mapping metrics reflecting ecosystem services and biodiversity features using U.S. Geological Survey Gap Analysis Program data, including land cover, land stewardship, and deductive habitat models for terrestrial vertebrate species http://fws-case-12.nmsu.edu/CASE/ES/ (illustrations below). The Lower San Pedro River watershed supports

significant biodiversity, especially avian, and surpasses even the Middle Rio Grande River in biodiversity.



Courtesy of Dr. William Kepner, EPA



Courtesy of Dr. William Kepner, EPA

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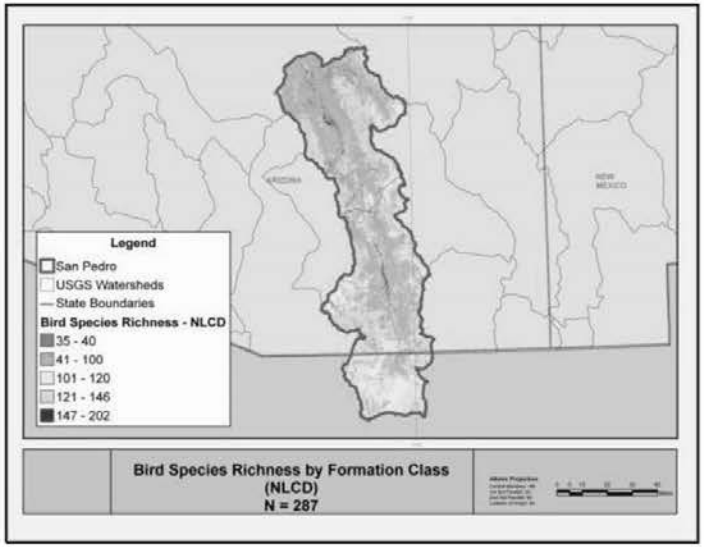
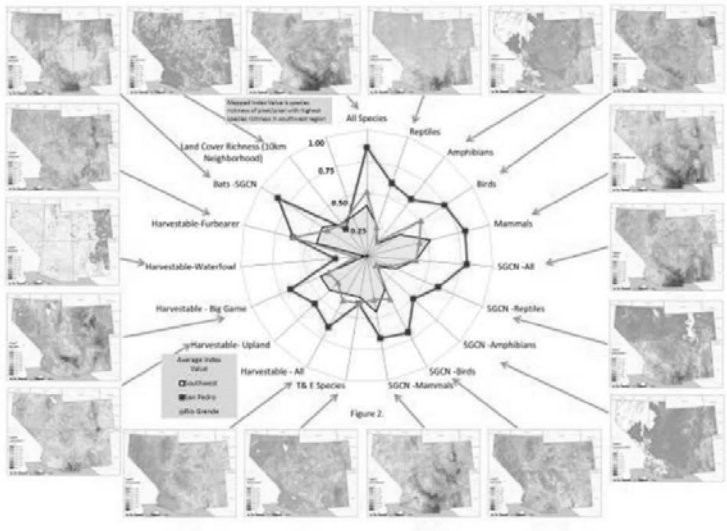


Courtesy of Dr. William Kepner, EPA

Mapping and quantifying ecosystem services have become strategic national interests for integrating ecology with economics in order to help explain the effects of human policies and the subsequent impacts on both ecosystem function and human welfare.

1601	Response to Comment
	See following page(s)

1601



Biodiversity Metrics for Southwest Region portrayed as a Radar Graph May 2011 Courtesy of Dr. William Kepner, EPA

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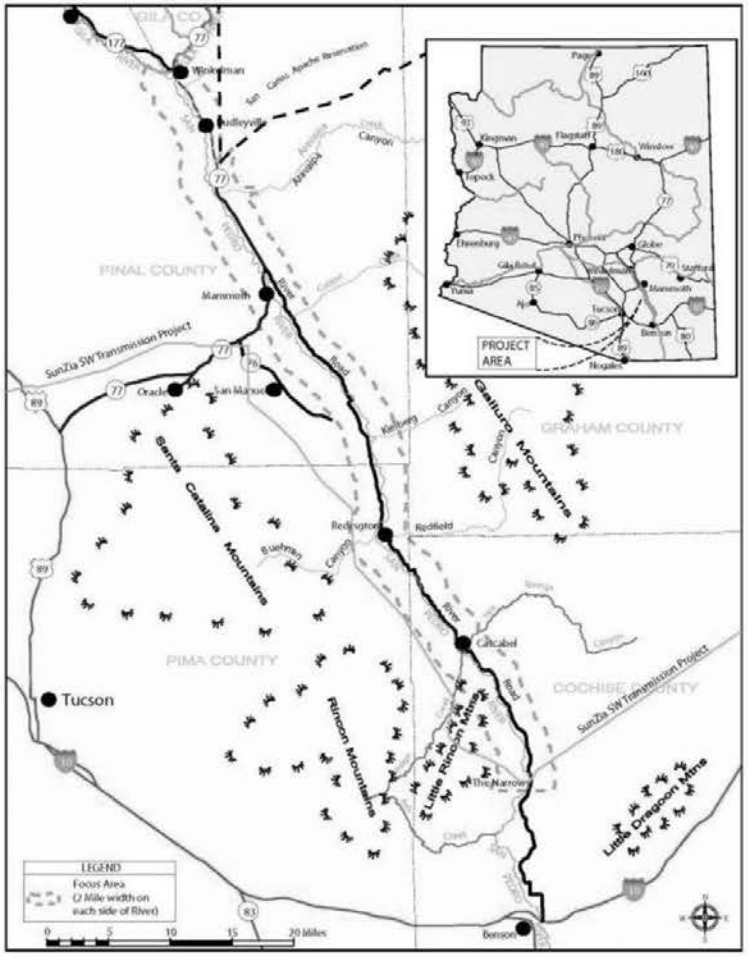
Informed by the study mentioned above, the proposed **Lower San Pedro River National Wildlife Refuge & Collaborative Conservation Initiative** is currently in the scoping phase of a regional discussion — the close of the public comment period was August 15th, 2012. The voluntary Initiative would be a landowner driven venture that would focus on restoring and conserving rural working landscapes while enhancing local economies along the lower San Pedro River corridor. Public outreach has included dialogue with diverse stakeholders such as local landowners, ranchers, NRCDs, other federal, state, and local agencies, Congressional delegation staff, the San Carlos Apache Tribe, and the Pinal Partnership's Open Space and Trails subcommittee. Should there be willing private landowners who choose to participate, collaboration could offer a variety of tools and partnership opportunities to improve habitat and management for sensitive species of plants and animals while contributing to a healthy river system. Cooperation could also contribute to sustainable ecotourism via such uses as interpretation, educational outreach, fishing, hunting, wildlife viewing and photography. Based on the recent biometrics study mentioned above, the San Pedro Watershed's ecosystem services are extraordinary and offer tremendous biodiversity at the confluence of four different ecosystems. The entire river is a "Keystone" Transition Zone.

1601	Response to Comment
34	Updated information on the Conservation Initiative has been added in the FEIS (Section 3.6.7.9). It is noted that the BLM Preferred Alternative would cross the San Pedro River at nearly the same location as the existing 345 kV transmission lines (The Narrows), which is the southern limit of the Conservation Initiative study area.



Courtesy of CWG. SunZia preferred alternative and the envelope for the proposed Lower San Pedro River National Wildlife Refuge

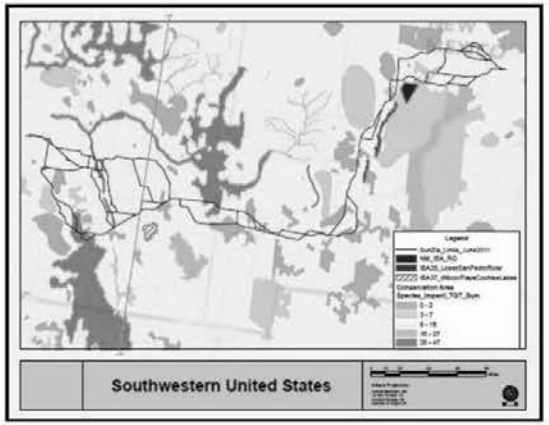
34

http://www.fws.gov/southwest/docs/LSPRCIPlanningUpdate1.pdf The DEIS fails to adequately analyze the potential impacts of SunZia on this proposal. In fact, surprisingly, the preferred alternative has the greatest potential impacts of any of the alternatives on environmentally sensitive water resources.

Birds and Important Bird Area (IBA) Designation

IBA designation is particularly relevant to protecting critical habitat utilized by birds during some part of their life cycle (breeding, feeding, nesting, and migrating) as well as conserving the general biodiversity of wildlife species. Migration and molt are very taxing on birds, and for some species migration is the time of greatest mortality.

To date, of the 2,500 state level Important Bird Areas identified nationally, only 449 have been prioritized as Global Important Bird Areas. These sites include Important Bird Areas significant for more than 65 globally threatened species. Global and Continental Important Bird Areas are determined through a prioritization process, which involves the review of identified State-level Important Bird Areas by the U.S. IBA Technical Committee — they represent high priority sites for conservation actions. http://aziba.org/?page_id=32 and http://www.audubon.org/bird/iba/prioritizedibas.htm.



Courtesy Tice Supplee, Audubon Arizona

1601

TAS established and, in partnership with Audubon Arizona, continues to implement the Arizona component of the global Important Bird Areas (IBA) Program, initiated in 1982 by BirdLife International. Arizona IBA Program offices work with diverse partners on issues and specific projects for the conservation of Important Bird Areas in Arizona to promote win-win objectives for people, wildlife, communities, and sustainable economies. The Audubon network within Arizona has thus far established 42 Important Bird Areas in our state, eight of which have Global IBA status, covering 3.38 million acres of habitat. Each is established using strict standards and scientific data and is peer reviewed by an independent panel of scientists. TAS and Audubon Arizona have partnered with the AZGFD to gather scientific data to identify and set science-based priorities for habitat conservation and to promote positive action to safeguard and protect significant bird habitats. TAS leads the Avian Science Initiative while maintaining the Arizona IBA Bird Survey Database and website http://aziba.org .

35 The DEIS fails to adequately analyze and develop measures to address potential impacts to birds for each of its alternatives and specifically for its proposed alternative. The Migratory Bird Treaty Act (MBTA) prohibits the taking of migratory birds, nests, and eggs, except as permitted. To minimize the likelihood of adverse impacts to all birds protected under the MBTA, TAS first recommends the No Action Alternative. In the event BLM does not adopt the No Action Alternative, TAS recommends construction activities occur outside the general migratory bird nesting season of February through July, or that areas proposed for construction during the nesting season be surveyed, and if necessary, avoided until nesting is complete. To minimize adverse impacts to birds protected under the MBTA, tree stands or other adequately vegetated areas should be surveyed for the presence of nesting birds during the general migratory bird nesting season of February through July. Disturbance to nesting areas should be avoided until nesting is completed. Sensitive areas should be avoided altogether.

The construction of new transmission lines should also include a detailed study of bird behavior at the precise location where construction is proposed in order to identify species that are particularly vulnerable, and which sites are intensively used. Those studies could be used to identify the optimum transmission line location. Transmission lines and associated structures could then be located where impacts would be completely avoided or minimized. To the best of our knowledge, this has not occurred.

36 Construction and maintenance activities should be conducted only during daylight hours to avoid noise and lighting issues during the night. If construction or maintenance work activities would continue at night, all lights should be shielded to direct light only onto the work site. The minimum wattage needed should be used and the number of lights should be minimized. Noise levels for day or night construction and maintenance should be minimized. All generators should be "whisper generators", be in baffle boxes (a sound-resistant box that is placed over or around a generator), have an attached muffler, or use other noise-abatement methods in accordance with industry standards.

Birds at lower elevation appear to be influenced by local topography (Williams et al. 2001). Williams et al. (2001) observed that the lowest 300 meters of bird migration probably represented the densest stratum of nocturnal migrants. Mabee and Sanzenbacker (2008) reported that the majority of nocturnal passerine migrants fly below 600 meters above ground level. Avian migrants reacting to local terrain may result in concentrations of [bird] migrants

1601	Response to Comment
35	An Avian Protection Plan will be developed in collaboration with the USFWS, AZGFD, and NMGFD, to ensure that the BLM fulfills its responsibilities with regard to the MBTA.
36	Comment noted. Please see response to Comment No. 35.

over ridge summits or other topographic features of bird migration through mountain passes (Williams *et al.* 2001). Relative to other bird groups migrating over land, passerines tend to migrate at lower flight altitudes, whereas shorebirds and waterfowl tend to migrate at higher altitudes (Kerlinger 1995). The construction of any new transmission lines should include a detailed study of bird behavior at the precise location where construction is proposed in order to identify species that are particularly vulnerable, which sites are intensively used, and hence the optimum transmission line location.

37

Birds of prey such as eagles, hawks, and owls frequently use power lines and support structures for perching and nesting, preying on species made vulnerable by the clearing of the ROW and the advantage of the excess height of the perch. These raptors can be electrocuted while using power lines, thus contributing to the cumulative mortality factors affecting these biologically important and environmentally sensitive birds. Standard techniques have been developed to prevent raptor electrocutions at electric distribution lines. This guidance is included in the publication *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006* by the Avian Power Line Interaction Committee. The document may be requested from Edison Electric Institute at http://www2.eei.org/products_and_services/descriptions_and_access/suggested_pract.htm .

Lower San Pedro River IBA

Identified as an IBA in January of 2007, the lower San Pedro River was scientifically peer reviewed and subsequently designated as a **Global Important Bird Area** in January of 2008. http://aziba.org/?page_id=461

The Lower San Pedro River IBA's southern boundary begins at 3 Links Farms in Cochise County and follows the San Pedro River downstream, north, through Pima and Pinal counties to Winkelman. The majority of the land is privately owned and only select properties in public ownership or under conservation easement and management are specifically included in the approximately 51.2 square mile, 32,762 acre IBA.

1601	Response to Comment
37	The comment notes that nocturnal migrant birds typically fly "in the lowest 300 meters" above the ground, or 600 meters as supported by a second citation. As discussed in the DEIS (Appendix B2), nocturnal migrants also typically fly above a minimum elevation above the ground, presumably to avoid the risk of collision with trees, sudden changes in terrain, and other features. This behavior also lowers the risk of collision with unlighted, stationary objects such as transmission lines, although that risk can be increased during inclement weather. The DEIS discusses a number of known areas of bird concentration, and measures taken to avoid them through route selection. The Avian Protection Plan will provide final details on selection and placement of mitigation measures to further reduce the risk of bird collision. APLIC guidelines to minimize the risk of electrocution. As noted in the DEIS, 500kV systems require spacing between energized conductors and paths to ground that are beyond the wingspan of any native bird species. Electrocution risk requiring design modification for mitigation would primarily be anticipated in substations that step down to lower voltages.

This site is important to numerous special status avian species including the Northern Beardless-Tyrannulet (*Camptostoma imberbe*) and Brewer's Sparrow (*Spizella breweri*). It is comprised of a rare, unique, or exceptional representative habitat/ecological community – a low elevation riparian river. Western rivers are increasingly imperiled and provide critical resources for migratory pollinators traveling the hemispheric flyways. In the arid southwest, the San Pedro River is unsurpassed in importance.

The IBA hosts significant concentrations of breeding birds: Southwestern Willow Flycatcher (*Empidonax traillii extimus*) at more than 40 percent of the Arizona breeding population, Mississippi Kite (*Ictinia mississippiensis*) at more than 40 percent of the Arizona breeding population and Gray Hawk (*Asturina nititda* = *Buteo nitidus*) at more than 30 percent of the Arizona breeding population. Land birds occurring in significant numbers/density and/or diversity include Bell's Vireo (*Vireo bellii*) and Yellow Warbler (*Vermivora luciae*).

Arizona Wildlife Action Plan Species of Conservation Concern in the Sonoran Desert include: Mississippi Kite (*Ictinia mississippiensis*), Gray Hawk (*Asturina nititda* = *Buteo nitidus*), Common Black Hawk (*Buteogallus anthracinus*), Belted Kingfisher (*Ceryle alcyon*), Tropical Kingbird (*Tyrannus melancholicus*), Thick-billed Kingbird (*Tyrannus crassirostris*), and Desert or Western Purple Martin (*Progne subis*), Red-naped Sapsucker (*Sphyrapicus nuchalis*), Olive-sided Flycatcher (*Contopus cooperi*), and Zone-tailed Hawk (*Buteo albonotatus*).

Continental Species of Concern include: Elf Owl (*Micrathene whitneyi*) with 40 breeding pairs/120 individuals, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) with 20 breeding pairs/60 individuals, Southwestern Willow Flycatcher (*Empidonax traillii extimus*) endangered in Arizona with 20 breeding pairs/60 individuals, Lucy's Warbler (*Vermivora luciae*) with 40 breeding pairs/120 individuals, and Abert's Towhee (*Melozone aberti*) with 40 breeding

pairs/120 individuals.

Global Species of Concern, for which the IBA was globally recognized: Bell's Vireo (*Vireo bellii*) (IUCN NT and Audubon WatchList Red) with 30 breeding pairs/90 individuals.

Vegetation communities include iconic cottonwood-willow gallery riparian forests and mesquite (*Prosopis juliflora)* bosque woodland terraces along the San Pedro River, mixed broadleaf forests in tributary canyons and washes, Upper Sonoran desert scrub on lower elevation uplands, Sonoran and Chihuahuan semi desert grasslands at intermediate elevations and Madrean oak woodlands in the surrounding mountain ranges. Conifer forests occur at the very highest elevations. This largely unfragmented watershed includes habitats representing the Chihuahuan Desert, Sonoran Desert, Southern Arizona Semi-desert Grassland, and Mexican Oak-Pine Woodland and Oak Savannah, all of which join together in the lower San Pedro River Valley.

Saguaro (*Cereus gigantea*), Foothill and Blue Palo Verde (*Cercidium microphyllum* and *C. floridum*), Ocotillo (*Foquieria splendens*), and a variety of cacti and small shrubs cover the Sonoran desert uplands. Mesquite (*Prosopis* spp), Catclaw Acacia (*Acacia greggii*), Burrobush (*Hymenoclea monogyra*), and Desertbroom (*Baccharis sarothroides*) line xeric washes, while Goodding Willow (*Salix gooddingii*), Fremont Cottonwood (*Populus fremontii*), Velvet Ash (*Fraxinus velutina*), and Netleaf Hackberry (*Celtis reticulata*) cluster along wetter drainage ways, interspersed with Sonoran Desert grassland typified by grama grasses (*Boutaloua spp.),* Three-awns (*Aristida spp.)*, and *Mulenberghia spp.*

Cochise County IBA parcels include the **Three Links Farm** consisting of 2,156 acres that lie along the San Pedro River. It was purchased by TNC as part of their long-standing program to protect the San Pedro River and its riparian habitat. Here the banks of the San Pedro are lined by an exceptional Fremont cottonwood-Goodding willow forest and mesquite bosque. This River's forest is host to 345 species of birds including 13 species of breeding raptors, and is a major migratory pathway for Neotropical birds such as Gray Hawk and the rare Western Yellow-billed Cuckoo. It is also the residence for more than 80 species of mammals, 40 species of reptiles and amphibians, 100 species of butterflies and 20 species of bats. Beaver have migrated to the property since the Conservancy's acquisition. Three Links is a retired farm that has had 836.9 acres placed in permanent conservation easements by TNC. The easements encompass six linear miles of the San Pedro River (9.75 kilometers) sub-divided into five parcels sold to conservation owners. Agricultural wells have been dismantled and a large proportion of the water rights are in the process of being retired from the property with the goal of increasing in stream flow in the San Pedro River. As a result of TNC's actions, a majority of the former agriculture fields are becoming dominated by mesquite. The river has been fenced from livestock and is a mix of closed canopy cottonwood/willow gallery forest with an open understory of Tamarisk and Hackberry, Ash, Arizona Walnut and segments of willow stands. The uplands are Chihuahuan Desert Scrub typified by Creosote Bush (*Larrea*), Black Brush and Yucca (*Yucca Elata*). Two one-kilometer long transect lines following the river channel have been established at this property. TNC is collecting riparian vegetation data at established transects that cross-section the river.

Pima County properties include the county owned **Bingham Cienega** — a small 503 acre

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parcel with an artesian fed spring, the site has a small marsh habitat and mature gallery cottonwood-willow forest along the river channel. Pima County is actively restoring riparian and sacaton wetland ecosystems. A fire in 2004 burned the willow and tamarisk vegetation around the marsh that was suitable Southwestern Willow Flycatcher habitat. Pima County also owns and manages the 41,000 acre **A-7 Ranch**, the 12,000 acre **Six Bar Ranch** (purchased with $11 million in voter approved bonds), and the 1000 acre **Buehman Canyon**, all tributary to the lower San Pedro River.

The uplands from Pima County north are Sonoran Desert Scrub and mixed cactus habitats. Saguaro (*Cereus gigantea*), Foothill and Blue Palo Verde (*Cercidium microphyllum* and *C. floridum*), Ocotillo (*Foquieria splendens*), and a variety of cacti and small shrubs cover the uplands. Mesquite (*Prosopis juliflora*), Catclaw Acacia (*Acacia greggii*), Burrobush (*Hymenoclea monogyra*), and Desertbroom (*Baccharis sarothroides*) line xeric washes, while Goodding Willow (*Salix gooddingii*), Fremont Cottonwood (*Populus fremontii*), Velvet Ash (*Fraxinus velutina*), and Netleaf Hackberry (*Celtis reticulata*) cluster along wetter drainage ways interspersed with Sonoran Desert grasslands typified by grama grasses (*Boutaloua spp.)*, Three-awns (*Aristida spp.)*, and *Mulenberghia spp.*

Pinal County contains the majority of identified properties within the IBA. **San Manuel Crossing** is a small BLM parcel (160 acres) in Township 9 South and Range 18 East; Southeast Quarter of Section 31 and Township 10 South and Range 18 East, Southwest Quarter of the Northwest Quarter Section 6. One 1 kilometer long transect line following the river channel has been established at this property. A mile further south from this location is a property acquired by SRP for Southwestern Willow Flycatcher and Western Yellow-billed Cuckoo mitigation known as **Spirit Hollow** that encompasses approximately one linear kilometer of river located at Township 10 South and Range 18 East; East Half of Section 8 and the North Half of the Southwest Quarter of Section 9. The site is almost entirely cottonwood/willow gallery forest. An additional 50 acres adjacent and south of Spirit Hollow has been acquired by the U.S. BOR for Southwestern Willow Flycatcher mitigation and is being managed by SRP.

7B Ranch is located east of the town of Mammoth. The 3,200 acre property covers seven river miles, is owned by Resolution Copper Company, and is being for conservation purposes as a part of a proposed legislative land exchange with the federal government. Two one kilometer long transect lines through the mesquite bosque have been established at this property. The property is contiguous with another 7 miles of river to the south owned by BHP-Billiton mining company. Combined, these two properties represent the largest intact mesquite bosque in Arizona at approximately 7000 acres. The BHP-Billiton land also has cottonwood/willow gallery forest that is contiguous with the San Manuel Crossing properties and has equally high conservation values for birds. The highest numbers of nesting Southwestern Willow Flycatcher on the San Pedro River have been documented at this location. Resolution Copper is in the process of creating a nature trail through this property and allowing access for birders and watchable wildlife enthusiasts. TNC is actively doing restoration work for the endangered Chiricahua Leopard Frog.

Aravaipa Crossing (approximately160 acres) has the next highest densities of Southwestern Willow Flycatcher habitat. The Triangle Bar property was previously privately owned by the

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mining company ASARCO and ownership has been transferred to the AZGFD to be managed for conservation. A management plan is currently being developed. SRP also has mitigation lands at this location (the Stillinger Preserve and the Adobe Parcel) which are managed by TNC and are included in the IBA. A one kilometer long avian transect line following the river channel has been established at this property.

Cook's Lake/Cienega Seep - BOR and SRP (**Adobe Preserve**) own mitigation land for Southwestern Willow Flycatcher totaling approximately 320 acres which is managed by TNC. ASARCO mining company owns parcels to the north and south, noted above, comprising about 160 acres of river land included in the Lower San Pedro IBA. A one kilometer long avian transect line following the river channel has been established across these properties.

Dudleyville Crossing and TNC San Pedro River Preserve - A well-developed cottonwood/willow gallery forest with a mature tamarisk understory. The properties extend from the Dudleyville Crossing (Schwenesen property) north and total about 1,300 acres. A small 160 acre parcel is just south of the confluence with the Gila River. A nesting colony of Mississippi Kite has been documented at this location. The land at Dudleyville Crossing was privately owned with a conservation easement held by BLM. An eminent domain action of this property by Pinal County is in process and the land is currently being managed by Pinal County. A one kilometer long avian transect line following the river channel has been established at this property.

TNC's San Pedro Preserve is a former fish farm with two ponds now being managed for marshbird habitat. The majority of the property is retired agricultural fields dominated by mesquite. The cottonwood/willow gallery forest experienced a fire in 2004. A one kilometer long avian transect line following the river channel has been established at this property.

We reiterate: the BLM, the BOR, the AZGFD, Pima County, TNC, SRP, and private landowners have protected close to 40,000 acres and invested over $25 million dollars in acquisitions of conservation/preservation lands and water rights (Baker, 2010). TAS is the Stewardship Group for this IBA (http://tucsonaudubon.org) and, as such, it is our duty to defend the integrity of the IBA against any perceived potential threats.

Willcox Playa/Cochise Lakes IBA

38

Though the SunZia proposal does not directly impact the Willcox Playa IBA, it may contribute indirect and cumulative impacts to migratory species by virtue of its general proximity to the project area and circumstances where avian species find power lines and towers difficult to perceive and therefore subject to collision for migratory species such as Sandhill Cranes (*Grus canadensis*), Snow Geese (*Chen caerulescens*), etc. Avoiding spanning bodies of water or placing lines between heavily-used bodies of water and landscape contexts in which the overhead static wire is obscured or hard to see is a foreseeable circumstance not adequately addressed in the DEIS

This IBA was first identified in June of 2009, and was identified as a **Globally Important Bird Area** in October of 2011. The heart of this roughly 74 square mile, 47,343 acre, IBA is the massive Willcox Playa, a broad alkaline lakebed fringed with semi-desert grassland (primarily saltgrass and sacaton) and mesquite.

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38	The BLM preferred alternative in this location would be located immediately adjacent to two existing transmission lines. Unguyed structures would be used in this location, and overall visibility to birds of all transmission lines may be increased through colocation. However, additional mitigation measures such as bird diverters remain under consideration, to be identified in the Avian Protection Plan.

The playa is seasonally flooded to a shallow depth. Outlying this playa are the satellite lakes/wetlands of Cochise Lakes (or aka Lake Cochise), alkali flats, and Willcox Playa Wildlife Area containing Crane Lake. The Playa itself is a former bombing range, owned by the Department of Defense and administered by the U.S. Army Corps of Engineers. It is not managed in anyway, and is posted no trespassing. On the upper east side of the playa is the AZGFD managed Willcox Playa Wildlife Area, consisting of 555 acres. The purpose of the Wildlife Area is primarily for optimizing waterfowl habitat and providing for hunting opportunities. There are ten "pot hole" ponds, and one 30-acre impoundment at the Wildlife Area. Over-wintering Sandhill Cranes (*Grus canadensis*) and migratory and wintering shorebirds, waterfowl, and waterbirds use the playa, the Wildlife Area (Crane Lake), and Cochise Lakes, for roosting, resting, and feeding. Sandhill Cranes depend heavily on the surrounding agricultural lands of the broader Sulphur Springs Valley for feeding, particularly in fields of waste corn.

The site is important to special status avian species such as Swainson's Hawk (*Buteo swainsoni*), Scaled Quail (*Callipepla squamata*), Chestnut-collared Longspur (*Calcarius ornatus*) and Cassin's Sparrow (*Aimophila cassinii*). It supports significant concentrations of shorebirds (greater than100) and cranes (greater than 2000). Willcox Playa and Crane Lake, within the northern portion of the Sulphur Springs Valley, support the second largest over-wintering concentration of Sandhill Cranes (*Grus canadensis*) in Arizona, typically 4,000 to 9,000 birds (White Water Draw is the area with the largest number of over-wintering cranes — between 10,000 to 22,000 and increasing). Crane numbers are typically 5,000 to 8,000 birds using the Playa, and another 4,000 to 5,000 birds using Crane Lake (with much variability at Crane Lake).

There are occasional years when crane numbers spike when a large number of birds (greater than13,000) from White Water Draw switch to roosting in this area (using either the Playa or Crane Lake).

By the late 1940s the expansion of agriculture within the Sulphur Springs Valley (through the advent of groundwater pumping), provided the waste crop food base (corn) to attract Sandhill Cranes to over-winter in the valley. The wetter period of the mid 1980s brought large increases in crane numbers, and since then numbers have been steadily increasing at both White Water Draw and the Willcox Playa/Crane Lake. Cochise Lakes and an area of nearby alkaline lakes, also provide important habitat for a great number of bird species

Most significantly both in spring and late summer shorebirds can stop-over in very substantial numbers at both the playa and along Cochise Lakes (numbering 400-800 individuals at Cochise Lakes). These in-migration shorebird species using the playa and Cochise Lakes, include: Wilson's Phalarope (*Phalaropus tricolor*) (April, May, July, August, September), Willet (*Catoptrophorus semipalmatus*) (April), Least Sandpiper (*Caladris minutilla*) (April, August, September), Western Sandpiper (*Caladris mauri*) (April, August, September), Long-billed Dowitcher (*Limnodromus scolopaceus*) (May, September), Black-necked Stilt (*Himantopus mexicanus*) (July, August, September), and American Avocet (*Recurvirostra americana*) (July, August, September), plus lesser numbers of other shorebird species (Killdeer (*Charadrius vociferous*), Marbled Godwit (*Limosa fedoa*), Spotted Sandpiper (*Actitis macularia*), Solitary Sandpiper (*Tringa solitaria*), Greater Yellowlegs (*Tringa melanoleuca*), Long-billed Curlew (*Numenius americanus*), Baird's Sandpiper (*Caladris bairdii*), Pectoral Sandpiper (*Caladris melanotos*), Stilt Sandpiper (*Caladris himantopus*), and Red-necked Phalarope (*Phalaropus lobatus*). Small numbers of some shorebirds occasionally breed within the IBA, including American Avocet (*Recurvirostra americana*) and rarely Snowy Plover (*Charadrius alexandrines*) (Audubon WatchList 2007-Yellow, AZGFD Species of Greatest Conservation Need 2006).

One waterbird species, the White-faced Ibis (*Plegadis chihi*), is notably abundant also during migration (April) reaching numbers occasionally in the low 100s (~300). Cochise Lakes support many species of ducks and grebes. Ducks over-winter on the lakes in large flocks, primarily composed of American Wigeon (*Anas americana*) (low 100s), Northern Shoveler (*Anas clypeata*) (low 100s), and Green-winged Teal (*Anas crecca*) (15-50+). In the spring months of March and April and again in the fall months of September and October, large numbers of waterfowl pass through and use Cochise Lakes, including: Ruddy Duck (*Oxyura jamaicensis*) (low 100s), Lesser Scaup (*Aythya affinis*) (occasionally 100+), Ring-necked Duck (*Aythya collaris*) (less than 50), and Cinnamon Teal (*Anas cyanoptera*) (less than 50). In rare very wet winters, waterfowl in huge numbers (greater than15,000, half of which are Green-winged Teal) come to feed and rest within the Playa. Mallard (*Anas platyrhynchos*) "Mexican" ducks nest within the Willcox Playa Wildlife Area. Small numbers of Pied-billed Grebe (*Podilymbus podiceps*), and rarely Eared Grebe (*Podiceps nigricollus*) may also nest.

The alkaline (mud) lakes are important to feeding shorebirds and so are the margins of the Playa and Cochise Lakes. Peregrine Falcon (*Falco mexicanus*) and Merlin (*Falco columbarius*) are frequently in the IBA in the winter preying on the duck and shorebird community.

Scaled Quail (*Callipepla squamata*) (Audubon WatchList 2007-Yellow), Cassin's Sparrows

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Scaled Quail (*Callipepla squamata*) (Audubon WatchList 2007-Yellow), Cassin's Sparrows

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(*Aimophila cassinii*) (AzPIF Priority 1999), Bendire's Thrashers (*Toxostoma bendirei*) – very rare (IUCN Vulnerable, Audubon WatchList 2007-Red), and Swainson's Hawks (*Buteo swainsoni*) (Audubon WatchList 2007-Yellow) nest on the perimeter of the playa. Occasionally, flocks of Chestnut-collared Longspurs (*Calcarius ornatus*) (March, October <100) (Audubon WatchList 2007-Yellow), and McCown's Longspur (*Calcarius mccownii*) (National PIF WatchList 2004, Homer Hansen personal communication), over-winter and/or pass through during migration, foraging in the grasslands within this IBA.

The Willcox Playa is located in the **Sulphur Springs Valley**, an internationally recognized destination for birding ecotourism particularly highlighting raptors. The valley hosts the largest concentration of wintering hawks in the United States, providing winter habitat for 14 species of raptors, including Great Horned Owl (*Bubo virginianus*), Northern Harrier (*Circus cyaneus*), Prairie Falcon (*Falco mexicanus*), Bald (*Haliaeetus leucocephalus*) and Golden Eagle (*Aquila chrysaetos*), Harris's (*Parabuteo unicinctus*), Ferruginous (*Buteo regalis*), Red-tailed (*Buteo jamaicensis*), and Rough-legged (*Buteo lagopus*) Hawk. Ferruginous Hawks are regularly seen around colonies of Botta's Pocket Gophers (*Thomomys bottae*), their favorite prey.

Summation

As long ago as November 1988, the AZGFD found that 90 percent of the Arizona's riparian habitat had been lost in *Wildlife Views* (AZGFD 1988). The San Pedro River watershed, Aravaipa Creek, the Willcox Playa and the Sulphur Springs Valley are all critical migratory and breeding corridors for millions of birds (4 million + annually), especially riparian dependent species, including some very sensitive species. This crucial portion of the Pacific flyway provides stop-over habitat for migrating avian species from the tip of South America to the Arctic. Recognized as supporting exceptional levels of **biodiversity** (400 bird species recorded), part of which must be maintained for past **mitigation** of habitat destruction at Roosevelt Dam, according to the Roosevelt HCP, the San Pedro River watershed supports over half and nearly two-thirds of the avian diversity in the U.S. It contains high-quality examples of **imperiled natural communities**: the Fremont Cottonwood-Gooding Willow riparian community, and old growth Mesquite bosques. These values conspire to designate the San Pedro River and the Willcox Playa **two** of only eight **Important Bird Areas in the state having "global" status**.

The reach of the San Pedro River from "the Narrows", just north of Benson, northward to the San Pedro-Gila River confluence at Winkelman, has been identified as both a State and Global Important Bird Area by our Arizona IBA Science Technical Committee (January 2007) and by a National Audubon IBA Technical Committee (January 2008), respectively. IBA Science Committee members (12) in Arizona are from the AZGFD, the USFWS, as well representatives from all of the other federal agencies in Arizona. Although Globally Important Bird Area status carries no regulatory authority, it does bring biological information and habitat protection importance awareness to the public's attention, as well as bringing quantitative data and habitat information to the governments and agencies, assisting in science-based land use and land management planning in order to conserve high value wildlife resources at the state, hemispheric and even global levels.

In short, the San Pedro River watershed is a unique biological area of global significance, a true jewel in our region that all should work to protect in perpetuity from the various and diverse

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threats coming from many directions. We stand in support of the creation of a Lower San Pedro River Collaborative Conservation Initiative and have advocated for the creation of a Lower San Pedro River Valley National Wildlife Refuge since 2005. We reiterate that the Southline Transmission Line project remains a viable alternative to any and all SunZia alternatives. 39

We strongly recommend adoption of the No Action Alternative, abandoning any consideration for the routes which impact the San Pedro River Valley or Aravaipa.

Our conclusion

The Aravaipa Creek area and entire San Pedro River Valley watershed has been the focus of conservation and mitigation for many groups and agencies for decades. BLM is aware of the proposal for a new National Wildlife Refuge in the exact area of their new "preferred alternative". Roadways, towers and infrastructure construction and maintenance will lead to fragmentation of the habitat, reducing the value, functions, and biodiversity of the region. This one project, the proposed SunZia Powerline, would undermine and destroy much or all of the conservation work, partnerships, and mitigation activities that have taken place in the past to preserve this rare habitat. We strongly recommend adoption of the No Action Alternative. 40

A new power line corridor, with multiple high towers, access roads, and habitat clearance, would severely compromise these significant Globally Important Bird Areas in Arizona. BLM's multiple use goals would be destroyed and made a mockery of by this development, for it would destroy the extraordinary ecosystem function and services of this unique area, together with a range of other values and uses that these intact, unfragmented habitats support. The NO Action Alternative is the only reasonable alternative.

Respectfully submitted,

Paul Green, Ph.D.
Executive Director | Tucson Audubon

Christina McVie
Conservation Chair | Tucson Audubon

Tricia Gerrodette
President | Huachuca Audubon Society

References and Addenda follow.

1601	Response to Comment
39	The Southline Transmission Line has a different purpose and need from the SunZia Southwest Transmission Project, and therefore is not an alternative.
40	Comment noted

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The Nature Conservancy
Protecting nature. Preserving life.™

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August 20, 2012

Bureau of Land Management
Adrian Garcia, Project Manager
SunZia Transmission Line Project
P.O Box 27115
Santa Fe, NM 87502-0115

Re: Comments on SunZia Transmission Line Project Draft EIS/RMPA

Dear Mr. Garcia:

We appreciate the opportunity to provide comments on the SunZia Transmission Line Project Draft Environmental Impact Statement. We recognize that new transmission lines are an integral part of the shift to renewable energy supplies in the Southwest, and welcome the chance to participate in their siting.

The mission of The Nature Conservancy is to conserve the lands and waters on which all life depends. The Nature Conservancy has invested significant time and resources in developing and applying science to our mission. A recent focus has been on the placement of energy infrastructure, with the goal to help find siting solutions that work for project proponents and yet minimize impacts to the natural environment.

Overall, we commend the BLM for your work with this project to co-locate routes with existing right-of-way alignments, which minimizes new environmental impacts while reducing costs associated with both construction and maintenance. We appreciate that most of the alignments avoid perennial streams and broadleaf riparian vegetation communities. We also appreciate the detailed Best Management Practices provided in Tables 2-10 and 2-11 of the DEIS.

Below, we provide general comments on expected direct, indirect, and cumulative impacts from this project, followed by route-specific comments. We have serious concerns about the potential impacts of siting this project in some areas, including the San Pedro River Valley, the Galiuro Mountains, both Rio Grande crossings, the Nutt Grasslands, and the Lordsburg Playas. We recommend avoiding several of those areas, and suggest mitigation measures if they cannot be avoided.

Potential for Mitigation

The Nature Conservancy supports a systematic approach to use mitigation for maintaining or enhancing environmental values in situations where development is being planned, despite detrimental environmental impacts (Kiesecker et al. 2009). In many ways, this is just an evolution of the mitigation hierarchy first established for U.S. wetlands mitigation by the Environmental Protection Agency and Department of the Army in 1990. As currently described in statute (40 CFR § 1508.20) mitigation includes:

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(a) Avoiding the impact altogether by not taking a certain action or parts of an action;
(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
(e) Compensating for the impact by replacing or providing substitute resources or environments.

This approach has gained wide application, and was recently clarified in a memo from the Council on Environmental Quality (2011). BLM did a good job of incorporating these elements into the recent Final Programmatic EIS for Solar Energy Development in Six Southwestern States.

Given the size and nature of the SunZia project, there will inevitably be significant environmental impacts if it is built. Some of these will affect high-quality, intact habitat that is currently helping keep additional species off the endangered species list. There are also real opportunities to avoid some of the most sensitive areas, and we appreciate that several potential routes were dropped during early phases of this process for just that reason. Below we suggest additional areas that should be avoided. We also suggest ways to minimize impacts for those areas which cannot be avoided. We do not have specific recommendations for compensation, but provide several analyses that should inform such measures.

1 In reviewing the DEIS, we appreciate the descriptions of standard and selective mitigation measures (Tables 2-10, 2-11), but see those as largely consisting of Best Management Practices. Most notably, they do not include any description of compensation to offset unavoidable impacts. We were unable to find descriptions of specific mitigation measures that would be required for each of the project alternatives. As this is a requirement of the EIS process (40 CFR § 1502.14), we request that such details be issued prior to issuance of the Final EIS so that the public can properly assess the tradeoffs involved with the various routes. These should also be part of the Construction Operations and Maintenance Plan, and should be included in the various lease agreements with land owners. We also request the Final EIS include a monitoring and enforcement program to assess the actual impacts of the project and the effectiveness of mitigation efforts, as described in BLM's guidance on preparing NEPA analyses.

The BLM has demonstrated authority to negotiate for substantive mitigation measures, even beyond the mandates of laws such as the Endangered Species Act. In 2010, BLM entered a cooperative conservation agreement with agencies from three states and proponents for the Ruby Pipeline, a 675-mile natural gas line. In addition to avoidance, minimization, and restoration measures, it provides $11.6 million in funding to offset the impacts that still remain. Those funds went to the state wildlife agencies of Nevada, Utah, and Wyoming for additional conservation measures to benefit two unlisted species. We suggest that unavoidable impacts of the 500-mile SunZia project merit a similar effort.

General Concerns

Habitat loss and fragmentation

We are very concerned about the direct and indirect effects of new access roads for construction and maintenance of transmission lines. There is direct habitat loss from the footprint of the roads, which should be estimated for each of the potential routes. Where routes cross steep, rocky terrain, road length will be significantly more than the length of the line because construction will require bulldozing circuitous access routes to individual tower sites. We expect these access roads will become permanent features of the landscape to simplify line maintenance, unless their closure and restoration is an explicit mitigation requirement.

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1	The standard mitigation measures described in Section 2.4.12 of the DEIS include best management practices. The selective mitigation measures (Table 2-11 of the DEIS) are recommended for specific resources and for each of the Project alternatives. For example, selective mitigation measures 4, 5, 6, and 8 are recommended for Subroute 1A1 as they would effectively mitigate impacts to soil resources (see Section 4.3.2 of the DEIS page 4-30). The selective mitigation measures are included in the POD and will also be included for the final Project construction, operation, and maintenance plan, which will include site-specific construction plans.

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Indirect effects of access roads are harder to measure, but no less significant. Roads become vectors for invasive species and sources of soil erosion, especially with frequent use. We anticipate that these access roads will be frequently used by the general public, regardless of structures built to control use. Our experience with managing utility corridors in large landscapes has been that fences and locks are cut, and gates are knocked down or removed on a regular basis. Anything that resembles a road becomes an attractive nuisance and an ongoing management headache. Those roads then become entry points for further incursions into undeveloped landscapes. The resulting use creates ground disturbance, soil erosion, and noise, among other impacts, fragmenting lands that were formerly continuous habitat for wildlife.

There is a large and growing body of scientific literature on the negative effects of landscape fragmentation. As described in the recent Arizona State Wildlife Action Plan (AGFD 2011), the Arizona Game and Fish Department "has identified the importance of maintaining unfragmented habitats as a critical component in the conservation of wildlife and wildlife habitat as well as addressing existing and predicted global climate change (i.e., protecting blocks of habitat across an elevational and vegetation gradient)." Depending on which route is chosen, the SunZia transmission lines and associated access roads will likely fragment several large, intact areas.

2 The ADOT/AGFD Wildlife Linkages Assessment identifies the portion of the San Pedro River Valley between the Catalina/Rincon Mountains and the Galiuro Mountains as a potential linkage zone and the river corridor as a riparian habitat/linkage zone (Arizona Wildlife Linkage Workgroup 2006). It also identified areas south of the Galiuro Mountains, and south of the Pinaleno Mountains. A more detailed analysis modeled wildlife movement corridors between the Galiuro and Pinaleno Mountains (Beier et al. 2008). All of these are crossed by one or more of the routes under consideration. These are areas where protecting the ability of wildlife to move should be considered in the design of fencing and other infrastructure.

Vegetation management under transmission lines has become a major impact due to recent regulatory changes, and contributes to both habitat loss and fragmentation. With the SunZia project, we are particularly concerned about areas where the routes cross riparian areas. Recent construction of other transmission lines in this region has created large openings in previously-continuous riparian forests, which will likely be maintained for the life of those lines. We applaud BLM and the project proponents for designing alternatives that generally avoid perennial stream reaches, but note that several riparian crossings are still under consideration. There is no mention in the DEIS of mitigation measures to

3 offset vegetation clearing and maintenance associated with the crossing of riparian habitat. The limited distribution and high biological value of these habitats in the Southwest warrant compensation in cases where sensitive, high value habitat cannot be avoided.

4 The standard practice for vegetation management in this region differs from that described in the DEIS (p. 4-65): "Nearly all vegetation communities affected by the Project are dominated by plants of relatively low stature, and a cleared or brushed right-of-way for conductor clearance and fire safety would not be required." Figure 1 shows a typical portion of the Arizona Public Service right-of-way from Moenkopi to Yavapai substations, with two 500-kV lines crossing the Prescott National Forest. Vegetation maintenance in that pinyon/juniper woodland with intermixed chaparral has produced a linear clearing 100 meters wide (2010 image, National Agriculture Imagery Program). This is similar to the vegetation in the Galiuro Mountains, where we would expect similar maintenance.

1602	Response to Comment
2	The Galiuro-Pinaleño-Dos Cabezas linkage is discussed in the DEIS (Section 3.6.8.1). Throughout the Project area, new or replaced fencing would be constructed at the direction of the landowner. However, AZGFD's wildlife-friendly fencing guidelines would be followed wherever possible as approved by the landowner. Other infrastructure associated with the Project is not anticipated to provide a barrier to wildlife movement. The Catalina-Rincon-Galiuro Linkage was identified in the Arizona Wildlife Linkages Assessment, but was not analyzed in detail or modeled to determine the biologically best corridors. As noted in the FEIS (Section 3.6.8.1), linkages without this detailed information were not addressed.
3	Offset or compensatory mitigation will continue to be considered, through Section 7 consultation or through agreements between the proponent, state wildlife management agencies, and management agencies or landowners as a condition of the right-of-way grant.
4	The information provided does not reflect typical conditions within the proposed right-of-way in the Galiuro Mountains. Isolated patches of woodland are present, often in drainage bottoms where spanning may be feasible. Individual trees may need to be removed, but this would not occur at a scale similar to that presented in the comment. Section 4.7.3.3 discusses the potential for the presence of the Project to affect fire management and use. Typically, transmission lines constrain the conditions in which controlled burning may be planned, but do not necessarily preclude fire use. This depends on site-specific conditions at the time of a planned burn, and cannot be reasonably predicted until individual burn plans are developed. However, the FEIS notes in this section that steep terrain or dense vegetation may require a full-suppression response for the protection of infrastructure, regardless of conditions at the time of the fire. Unplanned ignitions may occur throughout the Project area, or any other area with transmission lines, and are treated on a case-by-case basis. The potential for the Project to affect whether any unplanned ignition may or may not be used as a management tool is acknowledged, but cannot be predicted.

1602

Figure 1. Vegetation maintenance under dual 500-kV transmission line, Prescott National Forest.

4 For portions of several routes, the presence of the SunZia transmission lines would likely impair a different sort of vegetation management: the use of fire to restore or maintain healthy conditions in upland vegetation communities. Fire is a natural ecological process, and its absence can cause significant negative changes in community composition and function. Recent gains in our understanding of this have led the BLM, U.S. Forest Service, and other land managers to develop extensive fire plans that include the use of both natural and prescribed ignitions. However, wildland fires are generally not compatible with transmission line structures and operations, due to concerns for arcing and carbon deposition. The SunZia lines will likely become a reason to suppress fires in their vicinity and preclude planned fires that might affect the lines.

Cumulative Effects

The cumulative effects analysis in the DEIS is insufficient, in that it includes just the SunZia project study area. As a regional project, the analyses should include at least the whole area of Arizona and New Mexico.

To evaluate cumulative effects associated with the proposed SunZia transmission lines at an appropriate

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scale, we looked at existing habitat loss and fragmentation from roads and transmission lines in Arizona and New Mexico. We then compared the present baseline condition to a future scenario that included 20 transmission line proposals across Arizona and New Mexico currently in some phase of planning. We did not consider pipelines in this analysis but note that pipelines similarly fragment habitat and would further amplify this type of analysis.

5 Using a conservative estimate of 100-meter-wide corridors for all existing transmission lines, we estimate 723,000 acres has been disturbed by existing lines. The additional 20 lines would add another 158,000 acres of disturbance. If each of the proposed lines is implemented with the same mitigation standards as proposed for SunZia in the DEIS, i.e. without offsets for habitat loss, fragmentation, and other direct and indirect impacts, baseline environmental conditions across the region will decline and the need for new species listings under the Endangered Species Act will likely increase.

The remaining habitat blocks would also be compromised to the point where species and habitat recovery options would be limited. Figure 2 compares the current baseline condition to the future scenario. The largest remaining habitat blocks are indicated by progressively darker shades of green. The red polygon depicts the area encompassed by the Galiuro Mountains, Aravaipa Canyon, and Santa Teresa Mountains. The graphic to the right illustrates the change in size of this habitat block due to the proposed Aravaipa route of SunZia.

Figure 2. Habitat fragmentation in Arizona and New Mexico due to roads and transmission lines.

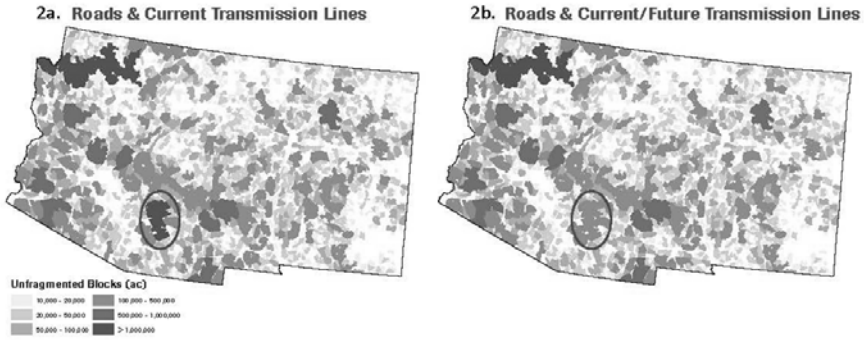


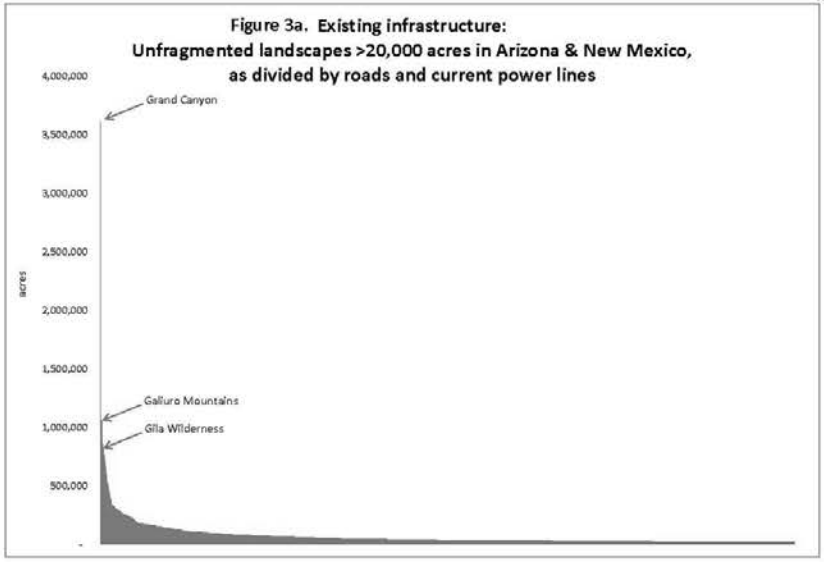
Figure 3 plots the distribution of habitat patch sizes in acres across Arizona and New Mexico. All patches smaller than 20,000 acres were excluded from the analysis to make the size of the graphic more manageable. Figure 3a illustrates how the current baseline condition is skewed considerably to the right, meaning the landscape of Arizona and New Mexico is comprised predominantly of small habitat fragments. This graphic also illustrates that outside of the Grand Canyon, there is no habitat block larger than the Galiuro-Aravaipa-Santa Teresa area. Figure 3b illustrates the change in ordinal position and size of the Galiuro-Aravaipa-Santa Teresa area from siting SunZia across the axis of this area.

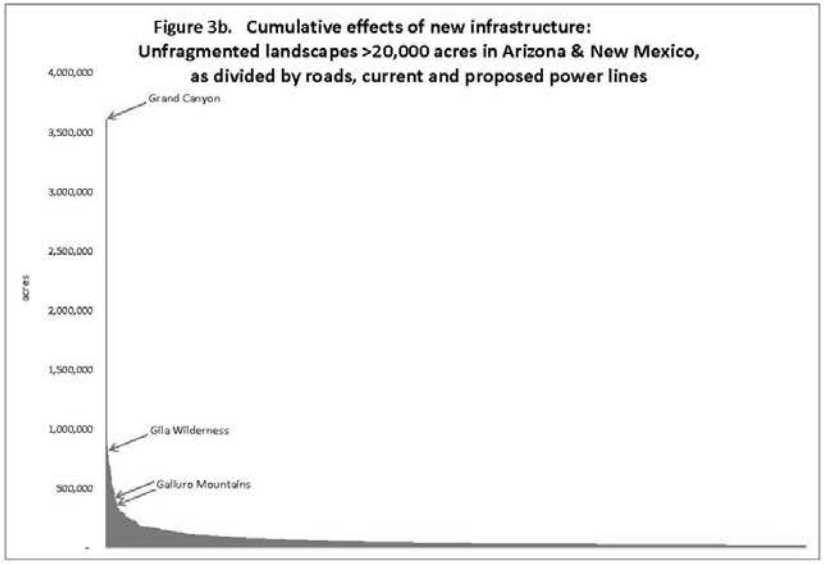
6

7 While the impacts are less dramatic, other alternative routes for SunZia would also affect large blocks of currently unfragmented habitat. And as part of the cumulative effects, the other proposed lines would significantly shrink at least 25 additional habitat blocks that are currently larger than 20,000 acres.

1602	Response to Comment
5	The DEIS acknowledges that transmission lines have negative effects on wildlife, potentially including listed species. The DEIS also notes the importance of protected habitat blocks in the Galiuro Mountains (Section 3.6.7., 3.6.8), and this discussion has been expanded in the FEIS. However, transmission lines have not been demonstrated to fragment habitat to the degree of many other linear features. Arizona's Wildlife Linkage Assessment, an effort by ADOT, AZGFD, and Northern Arizona University to identify wildlife linkages in Arizona, focused for example on highways, major roads, canals, railways, border infrastructure, and urbanization as the major regional factors contributing to fragmentation. The assessment also noted that the effects of transmission lines and other sources of fragmentation may be considered at a later date. No "major" fragmenters as considered in Arizona's Wildlife Linkage Assessment cross the Galiuro Mountains, and Subroute 4A or 4B of the Project would represent the most substantial infrastructure in that area. However, no evidence is available that indicates that the Project would prevent that habitat block from functioning as a whole. The DEIS acknowledges that standard and selective mitigation measures for design and construction would be implemented in this area, to minimize the amount of new access that would be created, to minimize the risk of erosion on steep slopes, and to avoid disturbance of wildlife during construction and maintenance.
6	Please see response to Comment No. 5.
7	Please see response to Comment No. 5.

1602





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7 The conclusion from these analyses is that the Sunzia transmission route proposed to cross the Galiuro-Aravaipa-Santa Teresa area would split in half the second largest unfragmented landscape remaining in the southwestern U.S. It would introduce habitat disturbance into an area where there are no paved roads, no dirt roads over the Santa Teresas into the Gila River Valley, and only one nearly-impassable jeep trail that crosses over the axis of the Galiuros from Aravaipa Valley to the San Pedro River Valley. With the Southwest's largest remaining intact area, the Grand Canyon, already in protected status, it raises the question of whether mitigation measures are even possible for disturbances to the region's second largest intact landscape.

8 A different analysis, conducted independently by the Arizona Game and Fish Department, showed most of the lower San Pedro River Valley as part of a single unfragmented block of land that included the Rincon, Galiuro, and Santa Teresa Mountains (habimap.org, accessed 1 August 2012).

Arizona Route-specific Comments

Preferred alternative, west of San Pedro (4C2c and related routes 4C2, 4C2a, 4C2b)

We recommend avoiding this route.

The Nature Conservancy and many others have long identified the Lower San Pedro River Valley as a top priority for biological conservation in the Southwest. It supports more than 300 bird species and provides important habitat for millions of migratory birds. The San Pedro River Valley has higher recorded bird species richness (number of species) and density (number of birds per hectare) than the Rio Grande Valley (Brand et al. 2009). It has been identified by the National Audubon Society as a Globally Important Bird Area. It includes designated Critical Habitat for Southwestern Willow Flycatcher and Gila Chub, and proposed Critical Habitat for Spikedace and Loach Minnow. More than 750 plant species have been identified in the riparian corridor and adjacent uplands. The watershed supports more than 80 mammal species, 12 amphibians, 55 reptiles, about 100 butterfly species, and 250 bee species. Historically it supported 13 native fish species, though several have been lost (Stromberg and Tellman 2009).

9 Tributary streams with perennial or intermittent flow have similar values to the mainstem San Pedro River. One study found that more species of migrating birds along the San Pedro Valley use isolated wetlands than sites along a continuous riparian corridor, and the relative abundances of most migrating birds were similar (Skagen et al. 1998). Link C441 would cross an intermittent reach of Buehman Canyon, which supports a significant riparian community.

10 Over the last three decades The Nature Conservancy and many other agencies and organizations have been working steadily to protect the Lower San Pedro Basin. Partners in this effort include the Arizona Game & Fish Department, Arizona State Parks Department, Bureau of Land Management, Bureau of Reclamation, Pima County, Saguaro Juniper Corporation, Salt River Project, and U.S. Fish & Wildlife Service. The Resolution Copper Company has offered to protect additional lands in the valley through a proposed land exchange. Together, these partners and other private landowners have protected approximately 192,000 acres and invested over $42.5 million in acquisition of conservation lands and appurtenant water rights. That investment required 68 separate land transactions, beginning in 1970 and continuing through 2012, and does not include adjustments for inflation.

1602	Response to Comment
8	The AZGFD has provided BLM with information based on the newly developed Habimap, including the unfragmented areas layer, as it related to the proposed Project. This information can be found in Comment letter 1949, Arizona Game and Fish Department.
9	Comment noted, and additional information has been reviewed. Link C441 would cross Buehman Canyon at a narrow point, where terrain would provide an opportunity to span the canyon and avoid any impacts to riparian vegetation. Although engineering has not been completed, aerial imagery and topographic maps indicated that the bed of the stream is approximately 200 feet lower in elevation than the nearest feasible structure pad sites. No new road crossing would be developed at this location. Site-specific engineering in sensitive locations will be coordinated, reviewed, and approved by a local interdisciplinary team prior to the issuance of a notice to proceed for each segment of the Project, to minimize or mitigate impacts.
10	Comment noted

10 The majority of those investments – about 144,000 acres – were made to satisfy mitigation requirements for habitat losses elsewhere in Arizona that were the unavoidable by-product of projects important to economic development. Jeopardizing the integrity of these conservation projects by construction of the SunZia transmission lines could trigger the need for additional and possibly less-successful mitigation. In particular, link C441 would cross through state trust lands managed by Pima County to provide a mitigation bank as part of their Habitat Conservation Plan; construction of the lines would reduce the conservation credit they receive for those leases.

11 The construction and maintenance of the SunZia lines would fragment portions of several large intact landscape blocks. The western side of the Lower San Pedro River Valley includes arms of two large blocks: Rincon Mountains (approximately 235,000 acres) and Santa Catalina Mountains (116,600 acres). The fragmentation analysis described above showed that this route would sever about 31,000 acres off the Rincon block and 17,000 acres off the Santa Catalina block, while reducing the elevation gradient of both.

If avoidance is not possible, we recommend at least the following mitigation measures.

12 If there is a decision to site the SunZia lines along this route, the following is a minimum set of mitigation measures that should be required.

- Minimize bird mortality through use of the best available technology to prevent bird collisions with the transmission lines, overhead ground wires, and guy wires. Use tower designs that minimize the need for guy wires.
- Minimize damage to riparian forests along the San Pedro River by shifting the alignment to an ephemeral reach or using sufficiently tall towers to span them without vegetation clearing and maintenance.
- Minimize damage to riparian forests in Buehman Canyon by using hilltop placement of towers or sufficiently tall towers to span them without vegetation clearing and maintenance. Avoid construction of roads that would create new access into the canyon.
- Minimize impacts to Paige Canyon by not running parallel down the canyon. This would avoid opening the length of the canyon to recreational off-road driving impacts.
- Minimize impacts to Allen Flat grasslands by siting lines adjacent to the existing roads, thus avoiding the need for new access roads and vegetation clearing in the habitat patch interior.
- Minimize the effects of fragmentation by not creating a continuous maintenance road along the route. Use landscape features such as cliffs to maintain permanent barriers to continuous travel.
- Compensation should be provided for the loss of mitigation and conservation lands, and for direct and indirect impacts to wildlife habitat.

East of San Pedro (4C1)

We recommend avoiding this route.

The rationale for avoiding this route is almost entirely the same as given for the Preferred Alternative.

13 The construction and maintenance of this alternative would fragment portions of the largest intact landscape block in the region. The eastern side of the Lower San Pedro River Valley includes arms of the Galiuro/Aravaipa/Santa Teresa habitat block (approximately 1,058,000 acres). The fragmentation

1602	Response to Comment
11	See response to Comment No. 5. Although the Project would cross large habitat blocks in the areas discussed, portions of those blocks would not be severed or isolated.
12	• An Avian Protection Plan will be developed, and will identify the selection and placement of mitigation measures such as bird diverters. The Plan will also specify any design measures such as the use of unguyed structures at river crossings or other locations with an identified bird collision risk. • The BLM preferred alternative crossing location on the San Pedro River is located in an ephemeral reach, with mesquite bosque but no riparian woodland present, and is adjacent to existing transmission lines. Structures at this location would be placed on elevated terrain outside the floodplain, and vegetation management is anticipated to consist of selective trimming of individual trees. • See response to Comment No. 9 regarding structure placement at Buehman Canyon. • Detailed engineering has not been completed at Paige Canyon and Allen Flat, but modifications to the tower placements and access roads would be considered to the extent feasible. • Comment noted. Access roads will remain open or be reclaimed based on maintenance needs and agency or landowner preference. Landscape features that may serve as barriers may be present in some locations. Site-specific engineering in sensitive locations will be coordinated, reviewed, and approved by a local interdisciplinary team prior to the issuance of a notice to proceed for each segment of the Project, to minimize or mitigate impacts. Compensatory mitigation will be developed collaboratively between the proponent and cooperating agencies, and as appropriate for any other applicable agency or landowner.
13	See response to comments 5 and 11.

13 analysis described above showed that this route would sever about 71,000 acres off this block.

If avoidance is not possible, we recommend at least the following mitigation measures.

If there is a decision to site the SunZia lines along this route, the following is a minimum set of mitigation measures that should be required.

- Minimize bird mortality through use of the best available technology to prevent bird collisions with the transmission lines, overhead ground wires, and guy wires. Use tower designs that minimize the need for guy wires.
- Minimize damage to riparian forests along the San Pedro River by crossing at an ephemeral reach (as shown in the DEIS) or using sufficiently tall towers to span them without vegetation clearing and maintenance.
- Minimize damage to riparian forests in Hot Springs Canyon by using hilltop placement of towers or sufficiently tall towers to span them without vegetation clearing and maintenance.
- Minimize impacts to Allen Flat grasslands by siting lines adjacent to the existing roads.
- Minimize the effects of fragmentation by not creating a continuous maintenance road along the route.
- Compensation should be provided for the loss of mitigation and conservation lands, and for direct and indirect impacts to wildlife habitat.

14

Sulphur Springs Valley (4B)

We recommend avoiding this route.

The link C170 would cross the Galiuro Mountains between the Aravaipa Canyon Wilderness and the Galiuro Wilderness. While the vicinity of that link appears on some maps as a corridor of state and private lands between the federal blocks to the north and south, on the ground it is part of an unbroken landscape of extremely rugged hills and canyons. A majority of that link is within the Aravaipa Canyon watershed. Arizona state trust lands in the northern Galiuros have ecological conditions and management needs that are identical to those of the BLM lands to the north and the Forest Service lands to the south. Most (51,000 acres) of the BLM lands around Aravaipa Canyon were state trust lands until an exchange in 1986. The narrow strip of state lands remaining in that gap was identified for BLM acquisition in the Safford District Resource Management Plan (BLM 1991).

15

The Aravaipa ecosystem supports at least 529 plant and 353 vertebrate animal species, including 233 birds, 50 reptiles, 48 mammals, 12 fish, and 10 amphibians (BLM 2010). The area includes five species currently listed under the Endangered Species Act, 13 BLM sensitive species, and 14 species on AGFD's list of Wildlife of Special Concern in Arizona. The Arizona Heritage Data Management System identified 35 species of interest as occurring within the Aravaipa Creek watershed.

As noted above, the Galiuro/Aravaipa region is currently the second-largest unfragmented block in Arizona and New Mexico, comprising approximately 1,058,000 acres. This is a large area of lands with wilderness characteristics. The creation of access routes for transmission line construction and maintenance would create a continuous swath of disturbance through the middle of that block, leaving remnants of 486,000 acres, 563,000 acres, and smaller fragments. There is no way to replace or mitigate for the reduction of that habitat block.

16

1602	Response to Comment
14	• See response in comment 12. • Link C660 would cross the San Pedro River below the lower end of a perennial reach, but in an area currently without riparian woodland. The river would be spanned at this location, although vegetation management is anticipated to be necessary. This alternative was developed in consideration of the permitted San Manuel Interconnect transmission line, which may be colocated with the Project in a utility corridor at the river crossing. • Hot Springs Canyon would be crossed at an ephemeral location. The terrain would support spanning of the canyon, and no new road crossing would be developed. • See response in comment 12. • See response in comment 12. • See response in comment 12.
15	Comment noted
16	Text has been modified in Section 3.12.4 of the FEIS as follows: Last sentence of first paragraph on page 3-266 *Citizen's Wilderness Inventory Units have been reviewed as part of the inventory of Lands with Wilderness Characteristics on BLM lands.* Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to go through an inventory for lands with wilderness characteristics. For the assessment of LWC's for SunZia the only LWC inventory units in Arizona that were identified based on the manual (MS-6310) was Muleshoe that would be crossed by one of SunZia's alternatives (not the Preferred Route). There are existing roads within this area that have altered natural conditions and thus wilderness characteristics. There is no documentation identified that provides guidance for managing these two wilderness areas as a single complex.

17 Constructed access routes for transmission lines, even if not built to a high standard, would subsequently provide access routes for recreational off-road drivers, who would then have easy access to canyons and mesas that are currently accessible only by foot or horseback. This would create a permanent set of new management problems for BLM staff trying to maintain the Aravaipa Canyon Wilderness and for The Nature Conservancy staff trying to maintain our Aravaipa Canyon Preserve.

The Galiuro Mountains and upland areas south of Aravaipa Canyon were recommended as one of three priority areas for fire restoration management by the Safford District BLM in an assessment of BLM fire management plans in Arizona (Schussman and Gori 2004). Ecological models presented there suggest the area historically burned every 7-10 years.

18 As acknowledged in the DEIS (Section 4.17.4.7), placement of transmission lines across the Galiuros would severely limit, if not entirely preclude, the use of fire as a management tool to maintain and enhance habitat for wildlife. This is due to the significant liabilities transmission providers face if they incur outages through lack of vegetation management and the hazards a transmission line creates for fire crews. Along with fragmentation effects of transmission lines, the exclusion of fire from habitats historically maintained by fire will result in habitat loss for species dependent upon grassland and forested habitats. Moreover, limiting the use of fire as a management tool increases the chance of catastrophic wildfire in an area with few roads and limited access for fire suppression activities, which would introduce a constant threat for any new infrastructure. Use of fire is the only practical tool to manage habitat for an area of this size. The lack of extensive infrastructure in this area has made habitat management using fire practical, something that has become increasingly difficult to accomplish elsewhere as urban, suburban, and exurban development encroach into prime wildlife habitat throughout the state's forests and grasslands.

While the Galiuro route would cross only state and private lands, its close proximity to federal lands would affect fire management across much larger areas where fire planning already exists. The Galiuro Mountains and upland areas south of Aravaipa Canyon were identified as areas suitable for wildland fire use for resource management benefit in the BLM (2004a) Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management, and in the BLM (2004b) Safford-Tucson Fire Management Plan. There is a similar policy in the Coronado National Forest (2010) Fire Use Management Plan. Similar policies were stated in the Muleshoe Ecosystem Management Plan (BLM 1998), which sets out a prescribed fire program using both natural and deliberate ignitions to restore and maintain upland vegetation throughout most of the Galiuro Mountains. Similar guidance was presented in the draft Aravaipa Ecosystem Management Plan (BLM 2010). An existing BLM prescribed fire burn unit is within one mile of link C170 (Figure 4; SunZia route added).

19 One of the biggest threats to the health of Aravaipa Creek and its native fish community is excessive sediment deposition (BLM 2010). While the proposed route is some distance from perennial reaches of the creek, erosion from construction and use of access routes would likely cause additional sedimentation that degrades one of the most important native fish habitats in the Southwest. The extremely rough terrain along the Galiuro portion of the proposed route would require extensive bulldozer work to reach many of the tower sites, which would create a high risk of sediment transport into the creek. This would also affect the Turkey Creek Riparian Area of Critical Environmental Concern. The effects would be a persistent problem, as line maintenance activities and recreational use of those access routes would be persistent.

1602	Response to Comment
17	Access roads to be closed will be identified by the BLM and other land managing agencies in an effort to prevent unwanted OHV use. These roads will be identified in the final POD after engineering and design have occurred for the preferred route for closure and deterrents to prevent OHV use can be implemented on a case-by-case basis.
18	Comment noted. Fire management and use is highly dependent on site-specific conditions at the time of a fire, and the FEIS notes that the Project could constrain fire use under some conditions (Section 4.7.3.3). Fire use would likely require coordination between the operators of the Project and land management agencies to create a burn plan for prescribed fire, or to determine the appropriate response to an unplanned ignition.
19	Potential effects to native fish in Turkey Creek and Aravaipa Canyon are discussed in the DEIS (Section 4.6.4.5, 4.6.5.4). The degree of these effects would depend on the final access plan, application of selective mitigation measures including helicopter-assisted construction, road maintenance, and determination of whether access roads would remain permanently or be closed.

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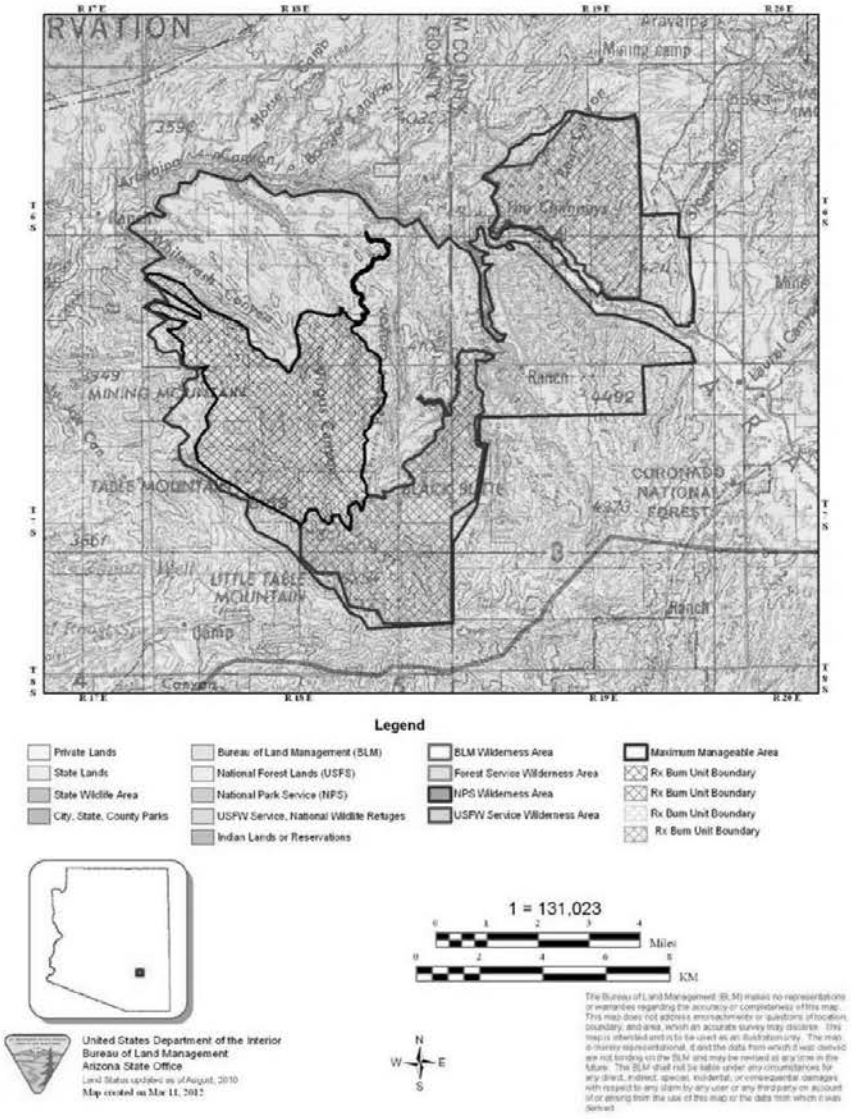
1602

Figure 4. Prescribed fire burn units for the BLM South Rim Allotment. SunZia route added for clarity.



1602

Link C592 of this route would cross the San Pedro River at the 7B Ranch, an area managed for its conservation values and intended as partial compensation for anticipated impacts to federal lands near Superior, Arizona. Depending on the exact siting and construction, this route could damage portions of a large mesquite bosque with significant wildlife values.

If avoidance is not possible, we recommend at least the following mitigation measures.

Damage to the conservation values of the Aravaipa/Galiuro area cannot be adequately mitigated. If, however, there is a decision to site the SunZia lines along this route, the following is a minimum set of mitigation measures that should be required.

20

- Establish clear multi-agency agreements that wildland fire use in the Galiuro Mountains, using both natural and prescribed ignitions, would not be constrained.
- Require a high standard for prevention of soil erosion that would contribute sediment to Aravaipa Creek. That should include measures for both construction and operation phases.
- Use landscape features such as steep canyon walls to create permanent control points for access roads across the Galiuro Mountains. These should preclude access from both east and west sides, along with breaks in the middle. This will require not using mechanically-created access routes, even temporary ones, in strategic locations.
- Minimize damage to riparian forests along the San Pedro River by crossing at an ephemeral reach or using sufficiently tall towers to span them without vegetation clearing and maintenance.
- Compensation should be provided for the loss of mitigation and conservation lands, and for direct and indirect impacts to wildlife habitat.

North of Mount Graham (4A)

We recommend avoiding this route.

The rationale for avoiding this route is almost entirely the same as given for the Sulphur Springs Valley route.

21

In addition to fragmentation of the Galiuro/Aravaipa/Santa Teresa habitat block as described above, this route would sever arms off the Pinaleño Mountains habitat block (253,400 acres), separating about 16,000 acres.

22

Link B153b would cross an intermittent reach of Ash Creek, and likely affect the conservation investments made by Arizona Game and Fish Department there.

If avoidance is not possible, we recommend at least the following mitigation measures.

Damage to the conservation values of the Aravaipa/Galiuro area cannot be adequately mitigated. If, however, there is a decision to site the SunZia lines along this route, the following is a minimum set of mitigation measures that should be required.

23

- Establish clear multi-agency agreements that wildland fire use in the Galiuro Mountains, using both natural and prescribed ignitions, would not be constrained.

1602	Response to Comment
20	• See response to comment 18. • Standard and selective mitigation measures would minimize erosion, further aided through planning of access roads or use of existing access. • Opportunities to use terrain to minimize recreational use of access roads may exist, and will be considered during development of a detailed access plan. • The proposed San Pedro River crossing location for subroutes 4A and 4B is in an ephemeral reach. No existing conservation easements are present at the proposed San Pedro River crossing location for subroutes 4A and 4B. However, privately owned land at this location is proposed to be included in a conservation land exchange and may be transferred to the BLM in the future.
21	See response to comments Nos. 5 and 11.
22	A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.
23	See response to comment 20.

- Require a high standard for prevention of soil erosion that would contribute sediment to Aravaipa Creek. That should include measures for both construction and operation phases.
- Use landscape features such as steep canyon walls to create permanent control points for access roads across the Galiuro Mountains. These should preclude access from both east and west sides, along with breaks in the middle. This will require not using mechanically-created access routes, even temporary ones, in strategic locations.
- Minimize damage to riparian forests along Ash Creek by crossing at an ephemeral reach or using sufficiently tall towers to span them without vegetation clearing and maintenance.
- Minimize damage to riparian forests along the San Pedro River by crossing at an ephemeral reach or using sufficiently tall towers to span them without vegetation clearing and maintenance.
- Compensation should be provided for the loss of mitigation and conservation lands, and for direct and indirect impacts to wildlife habitat.

23

Tucson (4C3)

Among the alternatives in Route Group 4, the Tucson route has the least environmental impacts. Link F600 would affect Pima County's Cienega Creek Natural Preserve by crossing both Cienega Creek and Davidson Canyon.

24

We recognize that there could be significant social impacts from this route.

We recommend at least the following mitigation measures.

The following is a minimum set of mitigation measures that should be required.

- Minimize damage to riparian forests along the San Pedro River by crossing at an ephemeral reach or using sufficiently tall towers to span them without vegetation clearing and maintenance.
- Minimize damage to riparian forests along Cienega Creek by crossing at an ephemeral reach or using sufficiently tall towers to span them without vegetation clearing and maintenance.
- Minimize damage to riparian forests along Davidson Canyon by crossing at an ephemeral reach or using sufficiently tall towers to span them without vegetation clearing and maintenance.
- Compensation should be provided for the loss of mitigation and conservation lands, and for direct and indirect impacts to wildlife habitat.

25

New Mexico Route-specific Comments

Rio Grande Crossing (Subroutes 1A and 1B)

We recommend avoiding this route.

Both the North River Crossing (Subroute 1A) and the San Antonio Crossing (Subroute 1B) are located within the critical Middle Rio Grande wintering habitat area for sandhill cranes. The proposed crossings are just south of Sevilleta NWR and the Ladd S. Gordon Waterfowl Complex and just north of Bosque del Apache NWR. The Bosque del Apache is the single most important wintering location for sandhill cranes in the Rocky Mountain Region providing habitat for over 50% of the entire population (Drewein and Bizeau 1974). Bosque del Apache has been home to the annual Festival of the Cranes since 1989 and is listed as one of the Audubon Society's Important Bird Areas. The Audubon Society estimates the economic benefit of the Festival alone to be $2.2 million and the local economic effects associated with

26

1602	Response to Comment
24	Subroute 4C3 was noted in the DEIS (Table H-6, H-7) as the alternative with the lowest impacts to biological resources.
25	• The BLM preferred alternative crossing location on the San Pedro River is located in an ephemeral reach, with mesquite bosque but no riparian woodland present, and is adjacent to existing transmission lines. • Subroute 4C3 would cross an ephemeral reach of Cienega Creek, using existing access adjacent to Interstate 10. Slightly elevated terrain would likely assist in minimizing vegetation management needs. No closed-canopy riparian woodland is present at this location, although individual cottonwood trees are present and future recovery of riparian woodland may occur. • Subroute 4C3 would cross an ephemeral reach of Davidson Canyon, in a location where slightly elevated terrain would likely avoid impacts to xeroriparian vegetation. Existing access is present at this location. Compensatory mitigation will be developed collaboratively between the proponent and cooperating agencies, and as appropriate for any other applicable agency or landowner.
26	The economic role of public lands is acknowledged in the DEIS, As stated in Section 4.13.4.5 "impacts (direct and indirect) to recreation and tourism have been identified by the public during the scoping process. The description of land use impacts to recreation areas or trails resulting from Project construction or operation have been described in Section 4.10.5 and visual impacts to recreation users have been described in Section 4.9.3. The Project would not substantially change the use of recreation areas or trails, and the number or type of recreation users would not be likely to change, therefore economic effects to recreation are not anticipated. Changes in the tourist economy would therefore not be expected." It is acknowledged that there are many ecotourism attractions throughout the study area, although it is noted that the BLM Preferred Alternative would not cross the Bosque del Apache National Wildlife Refuge. Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area.

1602

26 the Refuge to be more than $20.3 million. The sandhill crane is a favorite among birders and hunters alike. The shallow water roosting sites and irrigated grain fields attract vast numbers of cranes to the area every winter.

27 Because of its importance as a continental flyway, U.S. Fish and Wildlife Service and its partners have been working to conserve and restore migratory bird habitat for many years. Considerable federal and partner investments will be adversely impacted by the placement of the SunZia Southwest Transmission Line Project in the Middle Rio Grande Valley. For example, in 2001, 58 acres of wetland habitat was acquired and 2,500 acres of wetland habitat was restored in the Middle Rio Grande Valley by U.S. Fish and Wildlife Service and its partners through a $1 million North American Wetlands Conservation Act (NAWCA) grant and over $2 million in matching funds. An additional $1 million NAWCA grant was acquired in 2005 in phase two of this project to restore an additional 2,000 acres of wetland habitat and included over $2.5 million in partner funds. In 2011, the Rio Grande Agricultural Land Trust acquired six easements in the area as part of a NAWCA grant for riparian restoration and easement purchase. Since 2001, the federal investment in the Middle Rio Grande is approximately $9.5 million and has led to the restoration and protection of 7,500 acres.

The Middle Rio Grande Valley in New Mexico has experienced increasing human impacts that are compromising the long-term capability of these areas to provide adequate forage and roosting habitats to sustain cranes at current levels (Assoc. of Fish and Wildlife Agencies 2009). The trend toward alfalfa and vegetable production in place of small grains and the sale of farmland for real estate development has greatly reduced the availability of suitable winter food resources in the Middle Rio Grande. Due to limited wetlands and food resources, dense concentrations of roosting sandhill cranes have become increasingly susceptible to avian cholera outbreaks. Uncertainty in the future of water availability, increasing urban expansion, and changes in farming practices will further reduce the future value of the Middle Rio Grande Valley to cranes. Because of these existing and increasing threats to sandhill crane populations, any new impacts should be examined carefully.

28 Numerous studies have found that collisions with transmission lines are a significant cause of mortality for sandhill cranes (Ward et al.1987, Windingstad 1988, Wright et al. 2009) and that such collisions are most likely in their daily flights between roosting and feeding areas (Bevanger 1994, Faanes 1987, Wright et al. 2009). The BLM preferred placement (Subroute 1B) and alternative placement (Subroute 1A) of the transmission lines cross the Rio Grande in critical habitat for sandhill cranes in New Mexico and both routes can be expected to have considerable impact on the sandhill crane population.

29 Underground burial of the transmission line is the only effective way to avoid significant impact to the sandhill crane population. There are no examples of undergrounding 500kV transmission lines in the United States and only a handful from elsewhere. The cost of using underground technology for the Middle Rio Grande Valley was evaluated in the SunZia Southwest Transmission Project Underground Technology and Cost Analysis (Cost Analysis) and, based on the data provided in the report, appears to be prohibitively expensive. However, the Cost Analysis does not account for total project costs including expenses such as maintenance of diverters on above ground lines and cost of mitigation. A recent study from Alberta Electric System Operator (http://www.aeso.ca/downloads/UndergroundStudybackgrounderFeb24.pdf) found that while installation costs for undergrounding 20km of 500kV transmission system were estimated to be 7 to 10 times higher, the total projects costs were only 2 to 3 times higher than the overhead option. TNC recommends an overall feasibility study be done for underground burial that includes mitigation costs and maintenance costs. In a recent study on

1602	Response to Comment
27	A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.
28	Appendix B2 discusses the potential for migratory bird collisions with the Project. An Avian Protection Plan will be developed to address those issues.
29	The engineering study that was completed for the underground mitigation alternative did not include operation and maintenance costs. However as noted in Section 4.16.1 of the DEIS, "The potential long-term outages associated with an underground 500 kV transmission line would be unacceptable for a circuit carrying bulk power to major load centers…Operational risks and maintenance concerns would also be greater with underground transmission than with overhead lines."

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29 cranes and transmission lines, Wright et al. (2009) recommends immediate mitigation for transmission line placed near major roosting sites. The Nature Conservancy believes that the potential damage from above-ground placement to the sandhill crane population cannot be completely mitigated.

If avoidance of overhead transmission is not possible, we recommend at least the following mitigation measures.

30 1) Minimize collisions by installing diverter devices to make transmission lines more visible. Brown and Drewien (1995) found that powerlines equipped with plate diverters and long, closely-spaced spiral vibration dampers reduced mortality. A diverter that combines motion, light reflection, and luminescence (FireFly™, Firefly Diverters, LLC, Grantsville, Utah) is a new technique that may effectively reduce avian mortality at powerlines (Wright et al. 2009). However, the effectiveness of the FireFly technology needs to be more carefully studied. Installation of diverters will not ensure reduced mortality and consistent maintenance is required to ensure effectiveness of diverters.

31 2) Partially offset impacts to feeding areas by protecting agriculture lands. A recent study of cranes in the Platte River of Nebraska found that the likelihood of cranes using foraging habitats decreased with increasing distance from roosting habitat (Buckley 2011). This study also found the likelihood of use varied by crop type and showed that cranes had increased likelihood of using larger fields. Manipulation of crops within the crane flyway may be effective in changing crane flight patterns and minimizing the risk of collision. We recommend working with the U.S. Fish and Wildlife Service to study specific foraging preferences and movements of the Middle Rio Grande sandhill crane population to identify areas with best potential for changing current flight behavior patterns and to direct mitigation funds to existing conservation easement and habitat restoration programs in those areas identified by the study.

We evaluated foraging habitat potentially impacted by the proposed alternatives. Figure 5 summarizes the acreage of foraging habitat within three different buffer distances from the proposed transmission lines, to estimate both indirect and direct losses. The largest buffer distance is 10 miles and is based on a study by Lewis (1976) which found that optimal roosting sites are located within 10 miles of feeding areas. The second buffer distance of 1 mile is based on the current U.S. Fish and Wildlife Service best management practices (BMP) for minimizing whooping cranes impacts. This BMP recommends that diverters be placed on all transmission within 1 mile of roosting sites. A 1,000-foot buffer was also evaluated to show the direct losses expected from conversion of foraging habitat within the construction corridor.

32 Although the conclusion of the Analysis of Potential Avian Collisions with Transmission Lines at Four Locations on the Rio Grande in New Mexico (EPG Study; SunZia DEIS Appendix B2) is that the construction of the SunZia project "would have no significant effects on the population status of any species living in or migrating through the Rio Grande Valley," TNC believes that collision fatalities and the resulting population effects on sandhill cranes are difficult to predict accurately and EPG's conclusion is not supported by its study for the following reasons:

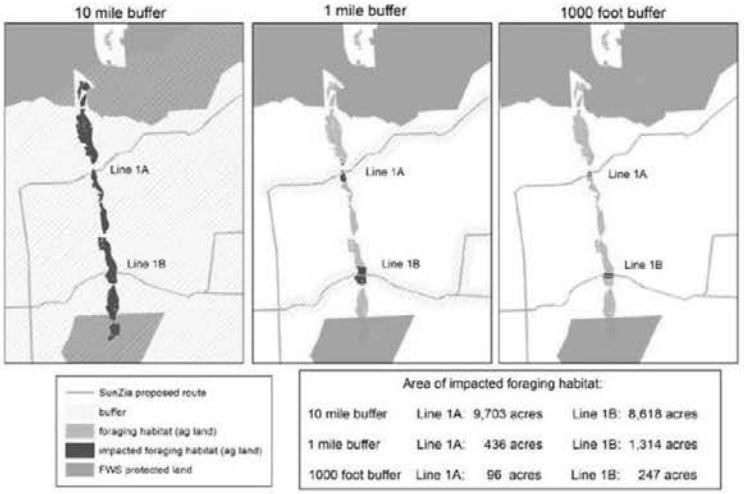
1) The survey periods are incomplete and do not contain the entire migration cycle. The year one survey, December 2009 – March 2010, excludes much of the fall migration. The year two survey, August 2010 – December 2010, misses the late winter and spring migrations. The EPG

1602	Response to Comment
30	Selection and placement of bird diverters will be addressed in the Avian Protection Plan.
31	Comment noted. Measures to manipulate crops or otherwise manage agricultural land to minimize negative impacts to Sandhill Cranes, either through reducing collision risk or preserving foraging habitat, would be negotiated between the proponent and the landowner. Measures such as these remain under consideration, and a cooperative agreement between the proponent, BLM, and cooperating agencies will be developed to address mitigation measures for the collision risk prior to a notice to proceed. The Project is not located within 1 mile of Sandhill Crane roosting sites.
32	The avian collision risk study, Appendix B-2 of the DEIS, was conducted independently by the University of New Mexico. EPG prepared the report for inclusion as an appendix of the DEIS. Although the mortality estimates in the study focused on construction of the Project with and without bird diverters, all available measures remain under consideration. The Avian Protection Plan will provide site-specific detail on the final selection of mitigation measures, and monitoring to assess the effectiveness of mitigation. Updated guidelines on reducing collision risk for birds will be released by APLIC in 2012, and this information will guide development of the Avian Protection Plan. All available measures will be considered and applied as appropriate to ensure compliance with the Migratory Bird Treaty Act.

1602

Figure 5.

Impacted Sandhill Crane Foraging Habitat in the Middle Rio Grande Valley



survey results are not an accurate reflection of true population numbers.

2) EPG's mortality estimates are based on assumptions about the effectiveness of a new technology (FireFly) from one study (Murphy et al. 2009) in which the authors conclude that a more rigorous study with experimental design is needed to draw any inferences about the effectiveness of this technology at decreasing crane mortality. Murphy et al. (2009) also assert that mitigation of collisions should integrate multiple tools, should not rely on minimization from diverter devices, and must be custom tailored for each site. 32

3) The EPG Study implies that the calculated low levels of mortality will have no population level impact and therefore can be ignored. Any killing of a migratory bird is a federal crime under the Migratory Bird Treaty Act and should be avoided. The expected mortality is additive mortality. Cumulative future impacts cannot be known nor assumed to be negligible, thus any new mortality should also be avoided.

Nutt Grasslands (Route Group 1)

33 The alternatives of Route group 1 will impact the relatively unfragmented Nutt Grasslands in northeastern Luna County and will cross The Nature Conservancy's Double Lightning Conservation Easement. Construction of new utility towers is prohibited in the terms of this easement. The

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33	Comment noted

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fragmentation analysis displayed in Figure 6 shows that the BLM preferred alternative (Links A400, A440) follows the best path through the area to minimize fragmentation. However new renewable energy development associated with the transmission line project could present additional fragmentation problems. 34

We recommend at least the following mitigation measures. 35

1) Minimize site disturbance to grasslands and replant/restore any grasslands impacted with native seed and follow best management practices recommended by the United States Department of Agriculture to prevent introduction and spread of invasive plants (http://www.invasivespeciesinfo.gov/plants/prevention.shtml)

2) SunZia should follow mitigation recommendations outlined in the "Suggested Practices for Raptor Protection on Power Lines" (APLIC 2006) in the Design, Construction and Operation phases. Effective implementation of an Avian Protection Plan is important in all three phases.

Gila River Complex (Subroute 3A – North)

Subroute 3A crosses the southern end of the Gila River Complex Conservation Area. This area is well- 36

1602	Response to Comment
34	Cumulative impacts resulting from future renewable energy development are discussed in the DEIS. Any additional updates or new information on future renewable energy developments has been included in the FEIS (Section 4.17). The Macho Springs wind energy facility in the Nutt Grasslands was discussed in the DEIS, but no new information has been provided regarding that project.
35	1. The Noxious Weed Management Plan is Appendix B2 of the POD, and details measures that will be implemented to prevent or treat the spread of invasive plants. 2. An Avian Protection Plan will be developed, following APLIC's 2006 guidelines to prevent bird electrocution and the 2012 guidelines (in press) to minimize collision risks.
36	The BLM preferred alternative in this area was placed in a low pass through the Peloncillo Mountains to avoid steep slopes and heavily vegetated areas, where impacts would be highest. Standard and selective mitigation measures would be used to further minimize ground disturbance and other negative effects to wildlife.

known for its suite of rare species and wild rivers and is an important wildlife corridor connecting the Peloncillo Mountains to the Mogollon Mountains. These isolated "sky islands" are fragile ecosystems and are prone to multiple stressors. Because of their undeveloped nature, habitat fragmentation is a substantial threat. Actions should be taken to avoid and minimize fragmentation of the Gila River Complex. 36

Lordsburg Playa (Subroute 3A1 – BLM Preferred Alternative and Subroute 3B – South)

We recommend avoiding this route.

Subroute 3A1 crosses the Lordsburg Playa, a vast ephemeral saline lake that provides habitat to considerable numbers of waterfowl including sandhill cranes after large rain events. The alkaline soils are also home to several rare plants including the endangered night-blooming cereus. Although this route parallels an existing pipeline right of way, the impacts to waterfowl from a new transmission line project will likely be substantial and in no way related to previous disturbance from the pipeline installation. 37

Conclusion

Thank you for the opportunity to comment on this document. We look forward to further involvement with this process.

Sincerely,

Patrick Graham
Arizona State Director

Terry Sullivan
New Mexico State Director

1602	Response to Comment
37	The BLM preferred alternative has been modified to select Subroute 3A, rather than 3A1, to avoid impacts to Lordsburg Playa.

1604

Cascabel Working Group
6590 N. Cascabel Road
Benson, AZ 85602
Submitted by Electronic Mail and Federal Express August 20, 2012

Mr. Adrian Garcia, Project Manager
SunZia Southwest Transmission Project
Bureau of Land Management
New Mexico State Office
301 Dinosaur Trail
Santa Fe, NM 87508
NMSunZiaProject@blm.gov

Dear Adrian:

Please consider this letter and attachment as comments on the SunZia Draft Environmental Impact Statement. I am herein submitting a compilation of original documents that demonstrate the inseparable connection between the SunZia Southwest Transmission Project and the SouthWestern Power Group's (SWPG's) Bowie, Arizona, power plant. This documentation has clear bearing on the stated purpose and need for SunZia and must be addressed in a revised or final environmental impact statement. These documents clearly show that SWPG's primary interest in proposing SunZia was to provide needed transmission capacity for its Bowie power plant. While several people have informed the BLM of this, the BLM has not yet acknowledged it and did not include SWPG's own purpose and need for SunZia in the DEIS or any publicity materials. This omission has become a central legal issue surrounding the project and will continue to be until the issue is resolved. 1

To provide some historical background on how SunZia became associated with the Bowie plant, in 2004 then-governor Bill Richardson of New Mexico requested that the Southwest Area Transmission Planning Group (SWAT) propose new 500-kV transmission lines to export wind-generated electricity from New Mexico. One of the hypothetical paths that SWAT proposed passed through the location of the SouthWestern Power Group's yet-to-be built Bowie Power Station. Seeing this as an opportunity to provide needed transmission capacity for the plant and to expand markets for the plant's power, SWPG proposed SunZia as a dual-purpose project, both to meet its own needs and to provide transmission capacity for renewable generation facilities. The latter was in keeping with Governor Richardson's directive to SWAT. SWPG would never have proposed SunZia had it not been for the transmission needs of its own power plant and the proposed location of SWAT's hypothetical line.

All of SunZia's presentations for nearly the first two years of the project (2006-2008) prominently featured the Bowie Power Station as a principal user of SunZia transmission capacity, and SWPG made no attempt to conceal this. Indeed, SWPG was very open about this with everyone concerned, SWAT and the Western Electricity Coordinating Council in particular. It was only when the project failed to attract investors and was expanded to central New Mexico did SWPG hide its intentions and attempt to portray SunZia as a pure renewable energy project.

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1	The BLM's action in considering the Applicant's right-of-way application is provided under the authority to the Secretary of the Interior (BLM) to "grant, issue, or renew rights-of-way…for generation, transmission, and distribution of electric energy" (43 Code of Federal Regulations [CFR] 2800). The BLM is responsible for complying with NEPA with respect to the construction and operation of the SunZia Project, but has no jurisdiction over regulating interstate transmission. FERC is responsible for analyzing and making decisions based upon (1) the justness and reasonableness of rates; (2) the potential for undue discrimination; (3) the potential for undue preference, including affiliate preference; and (4) regional reliability and operational efficiency requirements. The BLM is responsible for complying with NEPA with respect to the construction and operation of the SunZia Project, but has no jurisdiction over regulating interstate transmission. The Applicant's objectives, as stated in Section 1.4 of the Draft EIS, include "…to increase available (transfer capability) in an electrical grid that is currently insufficient to support the development, access, and transport of additional energy-generating resources including renewable energy, in New Mexico and Arizona." As reflected in the proposed action, the SunZia Project was designed to increase transmission capacity (i.e., transfer capability) by at least 3,000 MW, and could ultimately be designed for an increase of up to 4,500 MW. The Applicant identified the 3,000 MW mark as a minimum increase based on the existing demand for increased transmission capacity to relieve congestion, improve reliability, and provide future energy sources, including renewables, with access to market, balanced by marketing factors and engineering constraints. The Bowie Power Station (Bowie) was permitted to interconnect with the existing TEP 345kV Greenlee-Winchester-Vail transmission line at the Bowie Willow-345kV substation. The Bowie Willow substation does not afford Bowie a direct interconnection with the SunZia Southwest Transmission Project. The Applicant states that, although the SunZia Project may have been initially conceptualized as an interstate generation-tie line for Bowie with a transfer capability of 1,500 MW (thus only adding an additional 500 MW of capacity to the electrical grid), the configuration of the proposed SunZia Project (two 500kV transmission lines adding an additional 3,000-4,500 MW of capacity to the electrical grid), and Bowie are not "connected actions," as each has an "independent utility" from the other.

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SWPG's own need for this project did not cease merely because this project was expanded and lengthened.

The BLM is now complicit in concealing SWPG's motives and needs to be forthright about the company's purpose. While the use of SunZia by SWPG for the Bowie power plant will leave significant transmission capacity available for renewable generation facilities, SWPG yet intends to use SunZia to distribute Bowie power, and the SunZia Environmental Impact Statement must acknowledge this to avoid litigation.

1 When SunZia (read "the SouthWestern Power Group") submitted its first Petition for a Declaratory Order for SunZia to the Federal Energy Regulatory Commission (FERC) on January 29, 2010, SWPG made the unprecedented request to reserve for its own use an amount of transmission capacity equal to its percent interest in the project (see that attached pages from the petition). This amounted to 1,200 MW of capacity, 200 MW more than the full rated output of its Bowie power plant. SWPG has no plans to build any generation facilities other than the Bowie plant, making it the only generation facility that SWPG would use this transmission capacity with. Neither SWPG nor its parent company the MMR Group has any interest in renewable generation or plans to build any. This petition was a brazen attempt to secure the needed capacity for the Bowie plant, flagrantly violating open-access laws, and the FERC denied the request.

The attachment contains full links to all of the documents that support this case so that BLM staff can download and examine them. Some of these links may be broken in converting the Word document to pdf format, so parts of the URLs may have to be manually entered. The evidence is substantial and solid, and it will behoove the BLM to honor this information and incorporate it in the SunZia Environmental Impact Statement. This would help avoid potential litigation and additional project delays. I am sending this to other relevant people in the BLM so that they have this information and are pointedly and fully aware of it.

Sincerely,

Norm "Mick" Meader

Norm "Mick" Meader
Co-Chair, Cascabel Working Group
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nmeader@cox.net

Mr. Jesse Juen, Director, BLM New Mexico State Office, jjuen@blm.gov
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Ms. Paulette Sanford, Chief, IRM Governance Division, psanford@blm.gov
Mr. Corey Wells, IT Project Manager, IRM Governance Division, BLM_WO_Information_Quality_Guidelines@blm.gov

Attachment

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	See following page(s)

1606

1606

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August 20, 2012

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BUREAU OF LAND MANAGEMENT
SunZia Southwest Transmission Project
c/o EPG, Inc.
4141 N. 32nd Street, Suite 102
Phoenix, Arizona 85018

Via Federal Express
Bureau of Land Management
SunZia Southwest Transmission Project
301 Dinosaur Trail
Santa Fe, New Mexico 87508

Re: *COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT AND RESOURCES MANAGEMENT PLAN FOR SUNZIA SOUTHWEST TRANSMISSION PROJECT (MAY 2012, DES-12-26 AMENDMENTS) BY WINKELMAN NRCD and REDINGTON NRCD*

Gentlemen:

We are hereby transmitting to you the comments of Winkelman NRCD and Redington NRCD on the Draft Environmental Impact Statement and Resources Management Plan, May 2012, DES-12-26 for the proposed SunZia Transmission Project ("DEIS").

These comments supplement and are in addition to all prior comments and submissions by the Districts. Please consider, address and resolve these comments consistent with our request in the attached comprehensive comments on the DEIS.

The Districts are prepared to meet with responsible representatives of BLM to coordinate all of the above identified issues and resolve inconsistencies and conflicts with the Districts' plans and mission statements. We would expect that

MARGRAVE CELMINS
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ATTORNEYS AT LAW

all these matters be addressed and resolved prior to completion of the Final Environmental Impact Statement.

Very truly yours,
MARGRAVE CELMINS, P.C.

Lat J. Celmins
Attorneys for Winkelman and Redington National Resource Conservation Districts

c: Clients

N:\WP50\Winkelman NRCD\BLM Comment Ltr.wpd

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT AND RESOURCE MANAGEMENT PLAN FOR SUNZIA SOUTHWEST TRANSMISSION PROJECT (MAY 2012, DES-12-26 AMENDMENTS) BY WINKELMAN NRCD and REDINGTON NRCD
August 20, 2012

To:

NMSunZiaproject@blm.gov **Bureau of Land Management** New Mexico State Office SunZia Southwest Transmission Project P.O. Box 27115 Santa Fe, New Mexico 87502-0115	**U. S. Mail** Adrian Garcia, Project Manager **Bureau of Land Management** New Mexico State Office P.O. Box 27115 Santa Fe, New Mexico 87502-0115
U. S. Mail and courier Adrian Garcia, Project Manager **Bureau of Land Management** SunZia Southwest Transmission Project c/o EPG, Inc. 4141 N. 32nd Street, Suite 102 Phoenix, Arizona 85018	**Via Federal Express** Bureau of Land Management SunZia Southwest Transmission Project 301 Dinosaur Trail Santa Fe, New Mexico 87508

mailto:nmsunziaproject@blm.gov

Please accept and fully consider these comments submitted by Winkelman Natural Resource Conservation District ("Winkelman") and Redington Natural Resource Conservation District ("Redington") on the Draft Environmental Impact Statement and Resource Management Plan Amendments (May 2012, DES-12-26) for the proposed SunZia Transmission Project ("DEIS"). These comments supplement comments already submitted on October 9, 2011 by Winkelman and Redington, in meetings, and in written and oral communications with the Bureau of Land Management ("BLM") in which Winkelman and Redington expressed numerous concerns about the potential environmental impact of the SunZia Project on their Districts.

Additionally, throughout the scoping process, Winkelman and Redington submitted comments and evidence relating to the impacts on the San Pedro watershed together with requests for correction of information contained in the scoping documents including its final appeal of January 20, 2012.

These comments also supplement the Districts' specific requests for coordination of these adverse impacts with the long-range plans of Winkelman and Redington

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including the written requests directed to BLM on June 28, 2012, July 12, 2012 and July 17, 2012.

ARIZONA'S NATURAL RESOURCE CONSERVATION DISTRICTS

Winkelman NRCD and Redington NRCD (collectively "Districts" or "NRCDs") are the local political subdivisions of the State of Arizona with responsibilities that include the San Pedro River watershed and Aravaipa Creek habitat areas. The Districts were established by the Arizona Constitution, Article XIII, § 7 and A.R.S. § 37-1001, *et seq.* to protect the natural resources within their jurisdictions consistent with the natural resource policy of the State of Arizona and the Districts' own long range plans.

The Districts were established in 1941 by the State of Arizona as legal subdivisions of the State. They are organized by the vote of landowners within the District and management is by a Board of Directors elected by local citizens. The Districts are a form of local government authorized to identify and address resource conservation needs within their jurisdictions. There are 41 conservation districts spanning the entire breadth of Arizona, 32 of which are established under State law and 9 established under Tribal law. The elected District Board of Supervisors has the responsibility for determining the resource conservation needs for the District, for developing and coordinating long range plans and programs for natural resource conservation and implementing them under the Districts' annual plan of operation. The Districts work with and coordinate their efforts with Federal and State government, organizations, agencies and individuals to accomplish soil and water conservation. Arizona's conservation district law is embodied in legislation and establishes the State's natural resource policy, carried out on a local level by the Districts:

> It is declared the policy of the legislature to provide for the restoration and conservation of lands and soil resources of the state, preservation of water rights and the control and preservation of soil erosion, and thereby to conserve natural resources, conserve wildlife, protect the tax base, protect public lands and protect and restore the state's rivers and streams and associated riparian habitats including fish and wild life resources that are dependent on those habitats, and in such manner to protect and promote the public health, safety and general welfare of the people. (Ariz. Rev. Stat. Ann. § 37-1001)

A. Winkelman NRCD

Winkelman NRCD is located in the eastern part of Pinal County, the southwest corner of Gila County, a small portion of the southwest corner of Graham County and a small area in northeast Pima County. To the north lie the Pinal Mountains, to the east the Galiuro Mountains, to the south are the Catalina Mountains and to the west lies the desert land near Picacho Reservoir. Substantial portions of two of Arizona's major rivers, the San Pedro and the Gila, wind through the District. Winkelman NRCD includes 1.6 million acres of land of which less than 1500 acres is irrigated farmland. The remaining acres not within towns, cities or mine lands are rangeland. The land ownership is a

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combination of private, State and Federal lands. Portions of the Tonto and Coronado National Forests lie within the District's boundaries. Winkelman NRCD also includes BLM lands, Arizona State Trust Lands, and private lands.

Winkelman NRCD has established conservation district land management plans which are updated from time to time to carry out the public policy of the State on a local level. Winkelman NRCD is governed by five elected supervisors who meet on a regular basis to carry out its long range plans and statutory mandates. Winkelman NRCD coordinates its resource conservation efforts with Federal and State agencies including the BLM and takes its responsibilities seriously.

B. Redington NRCD

Redington NRCD was established in 1947 and encompasses 290,000 acres of land in the San Pedro River Valley of southeastern Arizona. It includes approximately 31 miles of the San Pedro River which runs north-northwest through the middle of the District and is the area's most defining geographical, ecological and social-historic feature. Redington NRCD's southern boundary lies just north (downstream) of the Narrows, a bedrock intrusion that divides the upper and lower San Pedro basins. The western boundary runs along the crest of the Rincon and Santa Catalina Mountains which separate the San Pedro and Santa Cruz watersheds. The northern boundary lies along the Alder Wash and Kielberg Canyon. The eastern boundary is an irregular north/south line through Range 20 East of the Gila-Salt River Meridian. It begins just north of the Narrows and ends on the southwestern flank of the Galiuro Mountains.

The single largest landowner in the area is the Arizona State Land Department holding trust lands for public schools and other trustees totaling 168,000 acres. Federal lands are approximately 77,000 acres and private lands are 45,000 acres.

INTRODUCTION

The NRCD's are legally recognized governmental subdivisions of the State of Arizona. As such, they have legal status under the Governor's Consistency Review. A 60-day Governor's Consistency Review is required by 43 CFR 1610.3-2(e) for all Resource Management Plans (RMPs) and RMP Amendments. The SunZia DEIS includes proposed RMP Amendments which require compliance with the Governor's Consistency Review as well as with the National Environmental Policy Act (NEPA).

The mission of the NRCDs is to protect, restore, and conserve the land, water, and soil resources, to preserve water rights and to prevent soil erosion, and to protect the tax base of public lands within District boundaries while assisting private property owners in making viable and responsible use of their private lands and of the public lands they use. The Districts' mission is derived from, and is consistent with, the mission statement of the State of Arizona set forth for all NRCDs organized under state law and is defined in statute.

3

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The mission of the NRCDs applies to nearly two million acres which are within the NRCDs' boundaries. The NRCDs have practiced responsible environmental stewardship of District lands for more than 60 years. The consequences of the Districts' environmental stewardship are restored or recovering ecosystems, continuation of viable agricultural economics, and preservation of traditional rural lifestyles. Environmental stewardship on District lands is evidenced by a series of adopted management plans and policies, and by numerous implementation measures which have required investment of millions of dollars in public and private funds. The SunZia project is inconsistent with the NRCDs' adopted plans and policies. It is also inconsistent with the adopted land use plans and policies of Pinal County, Arizona, and with the recommendations of the corridor location recommendations of the West-wide Energy Corridor Programmatic EIS. 1

Nowhere is the environmental stewardship of the Districts more evident than in the San Pedro River Valley, which would suffer significant unmitigable impacts to the human environment if the SunZia Project is approved on the Preferred Alternative route through District lands. Our detailed comments on the SunZia DEIS support the conclusion that the Preferred Alternative should not be approved by the BLM, and that the proposed RMP Amendments conflict with BLM's policy as articulated in Instruction Memorandum No. 2011-059, "National Environmental Policy Act Compliance for Utility-Scale Renewable Energy Right-of-Way Authorizations," which directs the BLM to identify "appropriate project locations that conform with federal law, regulation, and policy, and with existing land use plans, minimizing the need for land use plan amendment." 2

FEDERAL NOTICES AND PROCEDURAL HISTORY

In September of 2008, SunZia Transmission, LLC submitted a Right-of-Way ("ROW") Application to BLM requesting authorization to construct, operate and maintain two new single-circuit overhead 500 kilovolt transmission lines originating in Socorro County, or Lincoln County, New Mexico, and terminating at the Pinal Central Sub-Station in Pinal County, Arizona.

On May 29, 2009, BLM published a Notice of Intent ("NOI") to prepare an EIS pursuant to the National Environmental Policy Act ("NEPA"), as required by Federal regulations promulgated for the Federal Land Policy and Management Act on 1976 ("FLPMA"), found at 49 CFR Part 2800, 74 FR 25764. BLM is the lead Federal agency for the NEPA analysis and preparation of the EIS. The initial proposal was to transport electricity generated by power generating resources, including primarily renewable sources, to the western power markets and load centers. The emphasis was on renewable energy resources which included wind, solar and geothermal generation.

BLM acknowledged in its NOI that the SunZia Project may require amendment to at least four of the local Resource Management Plans. BLM affirmed that if Resource Management Plan amendments are necessary, BLM would integrate that process with the NEPA process for the SunZia Project. In disregard of the very issues that BLM identified 3

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1	Although the NRCDs plans and policies provide guidance and resources to landowners to implement conservation practices, the land use planning authority resides with the counties or incorporated jurisdictions. Permission to acquire right-of-way or easements (and construct within easements or rights-of-way) is granted by Arizona State Land Department, Bureau of Land Management, or private landowners. The SunZia project alternatives are consistent with the corridor location recommendations of the West-wide Energy Corridor Programmatic EIS provided designations for utility corridors on federal lands. Federal lands (primarily under BLM jurisdiction) are dispersed throughout the area; there are no opportunities for contiguous corridors crossing federal lands within Graham, Pima, and/or Pinal counties between the proposed Willow-500kV Substation and the Pinal Central Substation.
2	Authorization of a right-of-way for the BLM preferred alternative route within the San Pedro River Valley would conform with federal law, regulation, and policy, and to existing land use plans, minimizing the need for land use plan amendment. It is noted that a land use plan amendment would be required for the alternative Subroute 4C1 (east of the San Pedro River).
3	As part of the NEPA process, proposed RMP amendments were identified and analyzed in the DEIS. As stated in Section 1.11 of the DEIS, "the BLM must review relevant land use plans and RMPs to determine if a proposed project is in conformance with the management decisions and objectives of those plans" pertaining to new rights-of-way on BLM land. The results of the analysis indicate that the BLM Preferred Alternative would include RMP amendments within the Socorro and Mimbres BLM planning areas; however, no plan amendments would be needed for the BLM Preferred Alternative within the Arizona BLM planning areas (see Section 2.6 of the DEIS, Proposed Plan Amendments). A thorough analysis was completed and documented in the DEIS to address each of the specific issues noted by the commenter. Also as required by NEPA, all reasonable and feasible alternatives that were identified during the scoping process were included in the analysis. Alternative routes that were carried forward for detailed analysis in the DEIS included alternative routes along I-10 through the Tucson area, which were identified by the NRCDs and other interested parties. These alternatives were presented in the third scoping period conducted in the spring of 2010.

in its May 29, 2009 NOI, BLM simply plowed ahead with a draft EIS giving lip service to the issues, concerns and impacts raised by the Districts in the scoping and public meetings initiated by the Districts over a two-year period. These District meetings were held for the purpose of providing meaningful information to the BLM so that the agency could address matters of inconsistency between the proposed action and local government planning. BLM simply trampled over these very issues. On May 29, 2012 BLM gave notice of availability of the Draft Environmental Impact Statement (DEIS) for the SunZia Transmission Line Project and the prospective draft Resource Management Plan amendments and announced the opening of a comment period of 90 days or until August 22, 2012 (77 Fed Reg. 31637).

3

The Districts have actively participated in the scoping and planning process, and have repeatedly sought coordination as required in the Federal Land Management Policy Act and NEPA. Oral and written analyses which reflect inconsistencies between federal and local planning have been repeatedly submitted raising critical impacts and resource specific issues adversely affecting the Districts. These issues have been specifically identified with particularity and include (i) effects on, and alteration of the San Pedro River watershed; (ii) effects to wildlife habitat areas, plants and animal species; (iii) effects on cultural resources and archaeological sites; (iv) effects to visual resources and existing viewsheds; (v) conflicts with current land use plans and policies of the Districts; (vi) impacts on wilderness areas; (vii) effects on rural lifestyle and socio- economic conditions; and (viii) a need for avoidance of sensitive areas. The Districts have presented alternate routings and No Action Plan alternatives to the BLM and its contractor EPG.

CORRESPONDENCE AND PUBLIC MEETINGS

To that end, in addition to various communications that were made over time, the Districts sent a letter on June 28, 2012 to the BLM and responsible individuals including the Project Manager, State Directors and others requesting a follow-up meeting to the release of the DEIS so that specific inconsistencies between local planning and the now-identified Preferred Alternative could be addressed. That June 28, 2012 letter identified the statutory, contractual and factual basis requiring coordination with the Districts. Having received ***no response*** to that letter another meeting request was sent to the BLM and all responsible individuals on July 12, 2012. ***No response*** was received to that request. That letter was again followed by another on July 17, 2012 with again no response, and therefore an assumed refusal of compliance with federal requirements to coordinate local and federal planning.

4

Concurrently, BLM gave notice of numerous public meetings in New Mexico and Arizona soliciting comments on the DEIS. In each of these meetings, public participation and public inputs and comments were foreclosed. For instance, approximately 100 members of the public appeared at the Tucson meeting and were specifically told that *public participation was foreclosed and that there would be no public comments received at that time*. At the scheduled Benson meeting on July 12, 2012 about 50 members of the public responded to the BLM's public participation request and several of them were

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4	The BLM followed the necessary protocol with regard to public participation in the review of the DEIS. During the public open house meetings that were held in July 2012, attendees were offered the opportunity to discuss concerns and ask questions of the individual BLM and Project team members. The BLM received written public comments throughout the 90 day public review period.

prepared to present their views on the adverse impacts of the SunZia transmission line project. Public participation was again foreclosed. This had a chilling effect on public participation and sent a strong signal that the BLM is not interested in public inputs, that public comments would be ignored and that any further written comments by interested parties would be disregarded as in the past. BLM's actions have made a mockery of the entire administrative process.

There were only two people who were authorized by the BLM to speak publicly at the DEIS public meetings, BLM Project Manager Adrian Garcia and EPG representative Mickey Siegel. Their presentation at the Tucson and San Manuel meetings was approximately 45 minutes in length, and the audience was given instructions that any questions or comments regarding their presentation would addressed on a one-on-one basis between the members of the public and various members of the BLM and EPG staff that would be available afterward. When a member of the audience slipped from this protocol and requested a clarification or posed a question or even raised their hand during the presentation, they were quickly told that all questions would be handled afterward according to the protocol that had been described.

4

It was very disconcerting that the main person describing the project on behalf of the BLM was Mickey Siegel, who had in April of 2001 represented one of SunZia's owners (SWPG) in their application for a Certificate of Environmental Compatibility, for the routing of a connector gas line and a connector transmission line for SWPG's Bowie Power Plant. This placed Mr. Siegel in the position of potentially protecting his former client's interest in securing additional transmission capacity for the Bowie Plant by describing the SunZia project in a way that would promote acceptance of the proposed transmission project by the public.

Indeed, Mr. Siegel spoke exclusively about renewable energy resources during his presentations at the Tucson and San Manuel meetings. When he was speaking at the San Manuel meeting about renewable energy resources in the vicinity of the Bowie Plant, a member of the small audience asked, "What about natural gas resources in this region?" Mr. Siegel responded that he was only covering renewable energy resource zones, and that any questions needed to be held until after the presentation when they would be answered by a member of the staff.

By controlling the message about the purpose of the SunZia project, by ignoring much of what was submitted in written form regarding this issue in scoping, coordination, and IQA processes, and by forbidding any questions or comments during or immediately after the
presentations at the public meetings, the BLM was denying the public and stakeholders any opportunity to effectively challenge the narrative about renewable energy that was being presented by the environmental consultant, EPG, in the public meetings and in the DEIS.

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5 BLM has failed to identify the specific issues and existing conflicts with land and resource plans of the Districts, nor has it proposed any alternatives to resolve these issues as required by Federal law and regulations.

GENERAL COMMENTS ON THE DEIS

6 The statement of purpose of and need for the proposed SunZia project is fundamentally flawed. The DEIS cites the mandate of the Federal Land Management Policy Act (FLPMA) to accommodate multiple uses on BLM-managed lands as the need for the project. Multiple use is a policy, not a need. Multiple use policy could be implemented by a near-infinite range of possible alternatives such as increased minerals leasing or increased developed recreation areas, in addition to the SunZia project. A general multiple use policy does not demonstrate need for the specific proposed SunZia transmission project. Consequently, the SunZia project is a purpose which does not address a defined need. Need should be restated to define a problem which the SunZia project would resolve. (We provide detailed comments on the purported need and justification for the SunZia project in our commentary on cumulative impacts.)

7 The DEIS analyses only those existing conditions and environmental consequences which would occur on BLM lands. BLM lands comprise only 14.9 miles of the total 161.2 mile long Preferred Alternative Route (4C2c) through NRCD lands. The existing conditions and environmental consequences on the remaining 146.4 miles of State of Arizona and private lands are not addressed in the DEIS. The DEIS therefore presents a very limited and distorted picture of the full extent of the effects of the SunZia project. It would circumvent the spirit of NEPA to use the DEIS to support a grant of right of way on BLM lands when 90.8 percent of the route is not under BLM jurisdiction, and lands under BLM jurisdiction are randomly dispersed throughout the proposed transmission line route, so that route analysis in the DEIS is necessarily discontiguous and fragmented. A grant of ROW on isolated scraps of BLM land located along the proposed transmission line corridor would have the inappropriate consequence of putting the larger burden of fulfilling federal energy policy and project goals on state and private landowners to create a viable integrated ROW. The DEIS should be re-written to fully analyze and disclose effects to all lands—regardless of jurisdiction--which would be impacted by the SunZia project.

8 Throughout the DEIS, much of the discussion of environmental impacts is deferred to the Plan of Development (POD) which must be approved by the BLM. The location of access roads and housing camps, location and spacing of transmission line towers, location of intermediate substations, and many other particulars are discussed only generically in the DEIS, with details to be determined at some future date. This is an unacceptable level of analysis. Effects should be defined within the DEIS as the basis for agency decision making under NEPA, not in peripheral documents or in the future.

7

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5	As stated in the DEIS (p. 3-215), "Winkelman and Redington NRCDs (Districts) plans restrict new utilities within the San Pedro River and Aravaipa Creek watersheds." The Districts believe that construction of new utilities would conflict with the Districts' plans. Attempts to resolve this issue have included the evaluation and analysis of several alternatives that would avoid crossing lands within the Districts' boundaries, and development of mitigation measures that would effectively reduce impacts to lands and resources within the San Pedro or Aravaipa Creek watersheds.
6	The need for the BLM's proposed action (to grant a right-of-way on Federal lands), arises from the FLPMA, which establishes a multiple use mandate for management of federal lands, including energy generation and transmission facilities as outlined in Title V of the FLPMA. As stated in the DEIS (p. 1-5), "BLM recognizes the need for upgraded and new electricity transmission and distribution facilities to improve reliability, relieve congestion, and enhance the capability of the national grid to deliver electricity, as directed in the EPAct." These are examples of problems which the SunZia project would resolve.
7	The comment states that "BLM lands comprise only 14.9 miles of the total 161.2 mile long Preferred Alternative Route (4C2c) through NRCD lands." This segment refers to the "Subroute 4C2c", although the complete BLM Preferred Route would require rights-of-way crossing approximately 190 miles of BLM land. While the BLM can only grant rights-of-way on BLM land, the DEIS provides analysis for each of the complete alternative routes (i.e., from the proposed SunZia East Substation to the Pinal Central Substation) at the same level of detail within all affected jurisdictions, irrespective of land ownership, in compliance with NEPA and the CEQ guidelines.
8	A complete, site-specific analysis was conducted and documented in the DEIS based on the project description, including the draft Plan of Development. Although the POD would be approved at a future date after engineering has been completed, the impact analysis and mitigation plan was based on a well-defined and reliable project description that includes an estimate of the ground disturbance resulting from construction of new access roads. If project design details change, the final POD will address such changes with the necessary analysis and corresponding revisions to mitigation measures.

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SPECIFIC COMMENTS ON THE DEIS

The expertise of the NRCDs applies to lands within the NRCDs' jurisdictions, so we limit our specific comments to the sections of the DEIS which discuss Route Group Four with the exception of comments on DEIS topics which affect all route alternatives.

9 Section 1.3 discusses the Energy Policy Act of 2005 with reference to Section 368 corridors. The discussion is misleading because the West-wide Energy Corridor Programmatic EIS (November, 2007) identified energy and multi-modal corridors in the 11 western states, but the proposed SunZia transmission corridor is not identified. None of the corridors identified within Arizona is within the southern quadrant of the state where the proposed SunZia project would be located. The SunZia project is not within a designated corridor.

10 Section 1.4 states that "New Mexico and Arizona are characterized as regional power exporting areas, due to the availability of power from renewable resources." This is an inaccurate and misleading statement which, as written, implies that these states have power from renewable sources to export. This section should be rewritten to note that Arizona and New Mexico are *potential* power exporting areas because of renewable energy resources, but that there is not at present a net power (developed energy) surplus available for export.

11 In Section 1.4 it is noted that the location of proposed power generation projects, or of interconnections, cannot be disclosed. The full environmental effects of the SunZia project cannot, therefore, be analyzed.

12 Section 2.2.2.2, Table 2-1 lists a data layer "Vacant/Undeveloped" and assigns this category a Low sensitivity level. This characterization and sensitivity rating reflect a pejorative urban bias that is present throughout the DEIS. It would be more accurate to rename the data layer "Open Space/Managed and Improved Rangeland" and assign sensitivity rating of "Moderate" or greater to be comparable to the sensitivity level assigned to Urban Areas. Use of the Low sensitivity rating skewed route selection.

13 This same table lists Cultural and Biological resources data layers, but omits other data layers like soils, hazards, and wildlife movement corridors. The GIS constraints analysis was therefore incomplete as a basis for selecting corridor route alternatives. If the constraints analysis had been unbiased and inclusive, other corridor alternatives which avoid the San Pedro River Valley would likely have emerged. The Preferred Alternative west of the San Pedro River traverses a large percentage of soils subject to Moderate water erosion. The resulting potential increase in soil erosion is a direct contradiction to one of the primary resource protection purposes of the NRCDS.

14 Section 2.4.9.1 states, "Access roads would be identified in the POD and approved by the BLM before construction," and that other temporary use areas will be required. The location and environmental effects of these roads and areas should be disclosed and analyzed in the DEIS. The need for this disclosure in the NEPA document

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9	Although none in Arizona, segments of the SunZia project are located within the designated West-wide Energy Corridor within New Mexico (BLM preferred and other alternatives). The EPAct of 2005 does not require that all transmission lines be constructed in designated corridors. Also see response to preceding comment (no. 1) regarding the absence of West-wide corridors on non-federal lands.
10	As stated in Section 1.4, "New Mexico and Arizona are characterized as regional power exporting areas, due to the availability of power from renewable resources in excess of the power consumption in each state." However there is currently no net power surplus in New Mexico or Arizona. The DEIS addresses this issue in Section 1.3 and 1.4 of Chapter 1, and 4.17 of Chapter 4. One component of the need sought to be addressed by the applicant is to facilitate the exportation of future, yet to be developed, resources from these rich areas of potential renewable energy development. Therefore, the statement is not misleading as written.
11	The SunZia project includes proposed 500 kV transmission lines and substations, but power generation projects are not part of the proposal and the analysis of direct environmental effects of power generation projects is not part of the EIS studies. Although the locations of those proposed projects are unknown, the cumulative effects of potential power generation projects are evaluated in the DEIS (Section 4.17) based on estimates of future energy development scenarios.
12	It is acknowledged that some vacant/undeveloped lands are managed for open space or improved rangeland. However, where such lands have been designated for open space or conservation by the respective land management agencies or landowners, or contain improvements, the overlaid sensitivity of such lands was specified accordingly and added to the composite of opportunities and constraints. A low sensitivity would therefore only have been applied to areas that have no other specified land use or more sensitive resource value layer; it is a lower level of sensitivity, although not necessarily an opportunity for a utility corridor.
13	Soils, hazards, and wildlife movement corridors were considered in the analysis of opportunities and constraints. In the regional setting where the majority of the area contains moderately erosive soils and wildlife corridors (in most major washes, for example), the inclusion of those resources as primary siting criteria would not qualify as a means of "filtering" between resource layers because the geographic pattern is generally uniform. The level of impact to soils and wildlife movement corridors is typically proportionate to the amount of new ground disturbance that would result from the construction of the project, and site-specific mitigation measures would be applied to effectively reduce the impacts of soil erosion, hazard potential, and inhibition of wildlife movement.
14	See response to comment no. 8.

14 is reinforced by discussion in 2.4.10.1 which alludes to undetermined locations of access roads, and to-be-determined methods of construction which could have widely diverging ranges of effects on the environment, and on private landowners. Without inclusion of this information, the DEIS is insufficient as a basis for agency decision making. For example, there is reference to "drive and crush roads" on flat terrain within certain vegetation communities—such roads anywhere in a desert ecosystem have the potential to permanently destroy crusts on desert soils, resulting in increased erosion. The location of such roads should be part of the DEIS, not discussed generically with effects to be determined by "field testing" at the time of use.

15 What agency is responsible for approving access roads on state and private land? How will effects be analyzed on non-BLM lands? How will mitigation measures be monitored and enforced on non-BLM lands??

16 Section 2.4.11.1 has vague discussion of chemical treatment of noxious weeds with pesticides or herbicides that might or might not need to be used, and mechanical or hand cutting of woody vegetation. This is an example of the "either-or" ambiguity that is present throughout the DEIS, with analysis deferred to the POD. Will chemical applications be used on State and private lands?

17 Table 2-11, mitigation measure 4 notes that new access roads not needed for maintenance would be permanently closed. This measure is unlikely to be successful in preventing unwanted access in rural areas once a road has opened an area. Backcountry users are very resourceful in circumventing "closures"—the effectiveness of the Arizona/Mexico border fence is but one notorious example of the difficulty of excluding determined travelers. Public and private lands would experience increase in trespass and damage to property and the environment.

18 Mitigation measure 12 notes that use of helicopter placement of structures reduces impacts by decreasing ground disturbance, but implies that "loss of vegetation, soil erosion, potential damage to cultural resources, and visual impacts" will occur in areas where helicopter placement will not be used.

19 Mitigation measure 14 refers to "timber resources." Are there any? In a region characterized by low growing, sparse vegetation, this mitigation measure is of questionable effectiveness. In areas with riparian vegetation, any removal or thinning is conspicuous because of the limited area occupied by riparian species in the desert. Any removal is inappropriate because it introduces high visual contrast, as well as detrimental effects to biota, soils, and runoff characteristics.

20 Section 2.5.4 notes that route selection considered minimization of impacts to commercial and residential uses as a criterion. This is another example of the urban bias of the DEIS. Urban and commercial users in the region would get the benefits of the transmission corridor, but would automatically be protected against bearing any of the adverse impacts because of this bias. This externality is inequitable and disproportionately affects the residents of the San Pedro River Valley.

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15	The Arizona State Land Department is responsible for approving access roads on state land in Arizona and, as a cooperating agency, participates in the analysis of impacts, mitigation, and monitoring. Private landowners approve access roads on private lands, in accordance with county or state authorities where applicable (e.g., intersections with county roads, state highways, or encroachment in public rights-of-way). Implementation and enforcement of mitigation measures on non-BLM land is achieved by state, local, or other federal agencies within their jurisdictions.
16	Table 3-29 (page 3-79) identifies noxious weed species for which suitable habitat may be present within the study corridor. In addition to the effects identified in the DEIS, the DEIS frequently refers to the POD regarding specific information along the ROW during construction. It is anticipated that Noxious Weeds will occur along the ROW and require treatment as specified by the land owner. The POD includes a detailed Noxious Weed Management Plan which will require preconstruction surveys for identification of noxious weeds. Once these weeds have been identified, a plan to control the spread will be implemented. Recommended control measures (mechanical or chemical) will comply with all federal, state, county, and other local requirements. Preventative measures, control measures, and agency-specific requirements are outlined in the plan as well as a list of BLM-approved Herbicides and SOPs. The preliminary Noxious Weed Management Plan was based on the principals and procedures outlined in the BLM Integrated Weed Management Manual 9015.As stated in the Draft POD, Appendix B2 (3.3 Control Measures) "The BLM authorized officer will review and approve [the] Noxious Weed Management Plan prior to implementation. Control measures may include one or more of the following methods…" that may include mechanical, cultural, biological or chemical controls. On non-BLM lands, land management agencies or landowners would provide authorization for noxious weed control.
17	Comment noted
18	This statement implies that helicopter placement of structures is an effective way to mitigate impacts to the degree that it reduces the amount of ground disturbance from new access road construction. Depending on site conditions, helicopter use may not be feasible or practical in certain areas, and new access roads could be needed in addition to helicopter placement of structures.
19	Selective Mitigation Measure 14 would apply to areas with trees, which are primarily found at the two major river crossings (see EIS Table 2-11, p. 2-95). Trimming or removal is required for safety, as stated. Visual impacts would be somewhat reduced by implementing this measure
20	Several criteria were applied objectively to evaluate the benefits of the preferred alternative, without bias toward any one of them. Although the BLM's criteria include minimization of direct impacts to residential and commercial land uses, the objective to minimize high impacts to sensitive resources such as conservation areas or riparian vegetation was also considered in the selection.

1606

21 Section 2.6 discusses RMP amendments. The Safford RMP is more than 20 years old. The conditions which existed when it was adopted have very likely changed substantially. Urban growth around Tucson is one example of likely change. To amend the RMP to accommodate the SunZia corridor without a complete revision of the RMP updating it to reflect existing conditions and current policies and management objectives is inappropriate. In light of the fact that the Preferred Alternative route through the San Pedro River Valley is in a corridor avoidance area, amending the RMP without first updating the entire RMP is the equivalent of spot zoning.

Amending the RMP to allow the SunZia corridor has the potential for additional adverse impacts because of the co-location policy which encourages additional utilities to locate in existing corridors. Amendment of the RMP eliminates the present ROW avoidance area to create a new corridor zone which would open a Pandora's box of cumulative impacts from future utilities along the SunZia route. This potential adverse effect was not addressed in the cumulative impacts analysis.

22 Tables 3.3 through 3.7 –Climate Statistics, inexplicably omit any data on wind and insolation. Data on renewable energy development potential along the proposed SunZia route is relevant to informed decision making.

Section 3.5 does not address sustainability of water resource use in the San Pedro River Valley, nor does it discuss water rights. Water rights to the San Pedro River have been the subject of numerous lawsuits, some ongoing.

23 Where will water for dust suppression come from? The volume required could be very large, given the length of unpaved Redington Road and the length of the SunZia corridor itself, as well as ancillary facilities such as access roads, staging areas, and housing camps.

24 Water(s) of the US are not defined in discussion of 404 permits. New USACE protocols for jurisdictional determinations are not discussed.

25 Is the statement that Route 4C2c crosses 6.1 miles of perennial streams accurate, when there is only one crossing of the San Pedro River?

26 Table 3-40 Cultural Resources omits two important resource types, Historic Landscapes and Cultural Geographies.

27 Section 3.9 does not address visual resources on non-BLM lands. Therefore visual effects of the SunZia project on more than 90 percent of the proposed corridor cannot be evaluated.

28 Section 3.1.9.3 does not discuss the most recent Pinal County Comprehensive Plan, (2009) which has major sections on open space visual quality. The SunZia project should be in conformance with the Comprehensive Plan.

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1606	Response to Comment
21	The Safford RMP would not require an amendment if the BLM preferred alternative is implemented. The analysis of the plan amendment effects on land use and recreation resources for alternative Subroute 4C1 is documented in the DEIS (Section 4.18.1.9, p. 4-325). Also see response to comment no. 2.
22	Baseline climate statistics are provided in Chapter 3 of the DEIS in order to analyze the project's impacts to air quality and biological resources. For the cumulative effects analysis, renewable energy resource development potential was based on wind and insolation data provided by the Western Renewable Energy Zones report (WGA and DOE, 2009) cited in the DEIS (Section 4.17.3.3, p. 4-270).
23	It is acknowledged that water use is an important issue in the San Pedro Valley. While the sources of water to be used for dust suppression have not yet been identified, water is typically purchased and hauled to construction sites from available wells, and water use is controlled according to provisions in the Dust Control Plan element of the POD.
24	The definition and description of protocols for jurisdictional determination have been added to the discussion of regulatory framework (Section 3.5.1.3) in the Water Resources section of the FEIS. The following definition was added: Waters of the United States are defined as "those waters which are currently used or were used in the past or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide and all interstate waters including interstate wetlands" (33 CFR Part 328.3).An assessment of jurisdictional waters will be performed once the preferred route is selected.
25	According to the estimate from USGS maps, Subroute 4C2c is located within 600 feet of perennial streams for 6.1 miles (described in 3.5.1.2 Methods). Refined estimates that include affected areas for jurisdictional waters have been provided for Subroute 4C2c as indicated in Section 3.5.5 Summary of Inventory Results, Table 3-28 in the FEIS.
26	Table 3-40 lists cultural resources found within the Route Group 4 study corridors. No historic landscapes or cult geographies were located in this area during the records check.
27	Inventory and impact assessment methodology is provided in Chapter 3 and 4 for visual resources. The visual assessment included a complete analysis of all lands, regardless of jurisdiction, for scenic quality and viewing locations including associated KOPs (travel routes, recreation, residences).
28	Section 3.1.9.3 (assume that commenter refers to 3.9.1.3), includes a reference to the Open Space and Trails Master Plan as an amendment to the 2001 Comprehensive Plan, which provides guidelines for site design strategies to "preserve, scenic, aesthetic, historic and environmental resources." However, the Pinal County Comprehensive Plan (2009) was reviewed during the preparation of the DEIS (Section 3.10.4 Planned Land Use), which describes objectives to minimize visual impacts, but does not include regulations pertaining to visual resources.

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29 Section 3.10.10.1 notes the corridor restrictions of the NRCDs' plans, but this information is not considered in evaluating impacts. The NRCDs adopted by resolution a policy prohibiting corridors. The SunZia project would violate this adopted policy. This policy has been provided to the BLM by the Districts but has been ignored in selecting the Preferred Alternative route through District lands.

30 Table 3-47 needs to add the NRCDs as State of Arizona land management agencies.

31 Page 3-229 first paragraph sixth line appears to be missing a verb between Interior to and corridors.

32 Page 3-233, subheading *Subroute 4C2c* mischaracterizes lands within the NRCDs' jurisdictions as vacant/undeveloped. A more accurate description would be grazing leases and conservation areas. Page 3-236 repeats this mischaracterization, under *Subroute 4C2* which notes, "undeveloped areas used for ranching and grazing." There is a Department of Interior initiative to conserve "Large Landscapes"—which include ranches—because of their high value as intact blocks of habitat, among other values. To describe ranches as vacant/undeveloped conflicts with the intent of this Interior initiative. Moreover, the Sonoran Desert Conservation Plan in Pima County, immediately to the south of the SunZia project location in southern Pinal County, has acquired, and plans to continue to acquire, area ranches for conservation areas. The value of additional Pima County ranchlands for conservation is noted in the DEIS, which states that the County "proposes the Six Bar Ranch...and A7 Ranch… for preservation in the future." The DEIS is inconsistent in the acknowledgment of the conservation value of ranches on the one hand, and dismissal of their value as "vacant/undeveloped" on the other.

33 Page 3-263 subheading *Subroute 4C2c* states that the Preferred Alternative crosses the Arizona National Scenic Trail. After decades of volunteer work which built the trail and successfully achieved its inclusion in the National Trail system just a few years ago, this intrusion would be particularly unsuitable and degrading.

34 Section 3.13.8 is inadequate in its discussion of fire and medical emergency services. Construction crews are not the only possible source of demand for increase in emergency services, nor is the area of impact merely a narrow 500 mile corridor, as stated in the DEIS. A transmission corridor would introduce a new "superhighway" of access through land which previously had limited accessibility. The DEIS notes on page 4-310 that housing camps will be required for construction crews. This is the only place in the DEIS that housing camps are mentioned. These transient communities will have emergency services needs (and other impacts) that are not analyzed in the DEIS. Full discussion of the location, size and full range of environmental impacts and mitigation measures should be added to the DEIS. Construction activity will attract other economic opportunists, trespassers, and persons engaging in illegal activities which can profit from proximity to construction workers, as well as take advantage of newly created access along the entire SunZia corridor. It is interesting to note that the characterization of

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29	See responses to Comments No.1 and No.5.
30	Table 3-47 is a list of agencies with statewide land management or permitting authority in New Mexico and Arizona.
31	Comment noted. The text has been revised in the FEIS as follows: "The DOE West-wide Energy Corridors were created by Section 368 of the EPAct, which directs the secretaries of Agriculture, Commerce, Defense, Energy, and the Interior to *designate* corridors on federal land in 11 western states, including New Mexico and Arizona."
32	Land uses were categorized for the study corridor inventory according to the categories defined in Section 3.1.10.2, Methods. The definition of this category is as follows: "*Grazing/Multi-Use/Vacant* – all land uses that did not fit under a specific category, or were not specifically designated for a specific use by the responsible jurisdiction or land management agency." (DEIS, p. 3-216) This category includes privately owned lands, as well as state or federal (public) lands leased for grazing; the underlying description is "vacant" because they do not contain any other specified land use and are generally undeveloped, although they do contain utilities and range improvements such as tanks and fences. Note that the "Agriculture" category includes corrals and larger structure as well as active farming and facilities related to crop production which may be surrounded by grazing or other vacant lands. The Arizona State Land Department leases land for grazing, which does not include conservation. Also see response to comment no. 12.
33	Although the Preferred Alternative would cross the Arizona Scenic Trail resulting in high impacts to recreation users, it should be noted that the crossing would be perpendicular to the trail which would reduce the viewing duration for trail users (as opposed to paralleling the trail which would increase viewing duration).
34	The access road for construction of the transmission lines would be an unpaved road with limited access, not suitable for general vehicular use (i.e., not a "superhighway"). If housing camps are needed during construction, they would be located in existing communities where services are available and suitable for overnight use, such as recreational vehicle parks. Construction of the Project would result in transient communities. Fire-fighting requirements are described in the Fire Protection Plan, Appendix A4 of the Preliminary Plan of Development.

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34 demand for emergency services was so narrowly addressed in the DEIS that the Pinal County Sheriff's Office, the Department of Homeland Security, and Immigration and Customs Enforcement are not listed in the DEIS as having been contacted. This should be corrected by contacting these agencies and addressing the potential demand for additional services they foresee as a result of a new corridor close to the US-Mexico border.

In addition, fire-fighting capabilities are noted in Table 3-68. There is no discussion of response times, nor any evaluation of the capacity of the numerous volunteer fire departments listed to respond to fire emergencies, and especially their ability to respond to large wildfires. There is reference to the BLM and "other land management agencies." In a rural environment which is prone to serious wildfire events, more detail about the BLM's and other agencies' responsibilities and ability to respond to emergencies should be provided.

35 Section 4.1.1.1 makes reference to "*Resource quality*….including the local value and importance of a resource" as a measure of impact. Local value and importance does not appear to be used anywhere in Section 4 to evaluate impacts. The value and importance of numerous resources to the occupants and ecosystem of the rural San Pedro River Valley needs to be fully analyzed.

36 Table 4-5 "Criteria for Assessing Intensity of Impacts to Mineral Resources," lists "Areas with known active mines or mining claims with commercial value" as a measure of high impact. How has information provided in Section 3, which notes the Preferred Alternative crosses 16.4 miles of active mines--been used to correlate to this impact measure? Page 4-38 notes that the Preferred Alternative would restrict access to mines near San Manuel, but this restriction does not seem to be discussed elsewhere, or mitigation measures listed.

37 Page 4-38 has discussion of 100-year floodplains. Has the 100-year floodplain of all major washes in the Preferred Alternative corridor been mapped, or has 100 year flood plain mapping been limited to the San Pedro River? If washes have not been mapped, information is incomplete as a basis for determining impacts from geological hazards and the full extent of potential soil erosion.

38 Page 4-48 also has discussion of impacts to soil resources, including prime and unique farmland. Has the USDA concurred by letter with the assessment of impacts and mitigation measures on farmland conversion under the Farmland Protection Policy Act?

39 All impacts to soils along Subroute 4C2c have unmitigable residual impacts which result in increased erosion. This is unacceptable because of potential increase in adverse effects to water quality in the San Pedro River and other surface watercourses. It also has an incremental increase in PM10 and PM2.5 air quality degradation. Pinal County is nonattainment for PM10. Southern Arizona has experienced a prolonged

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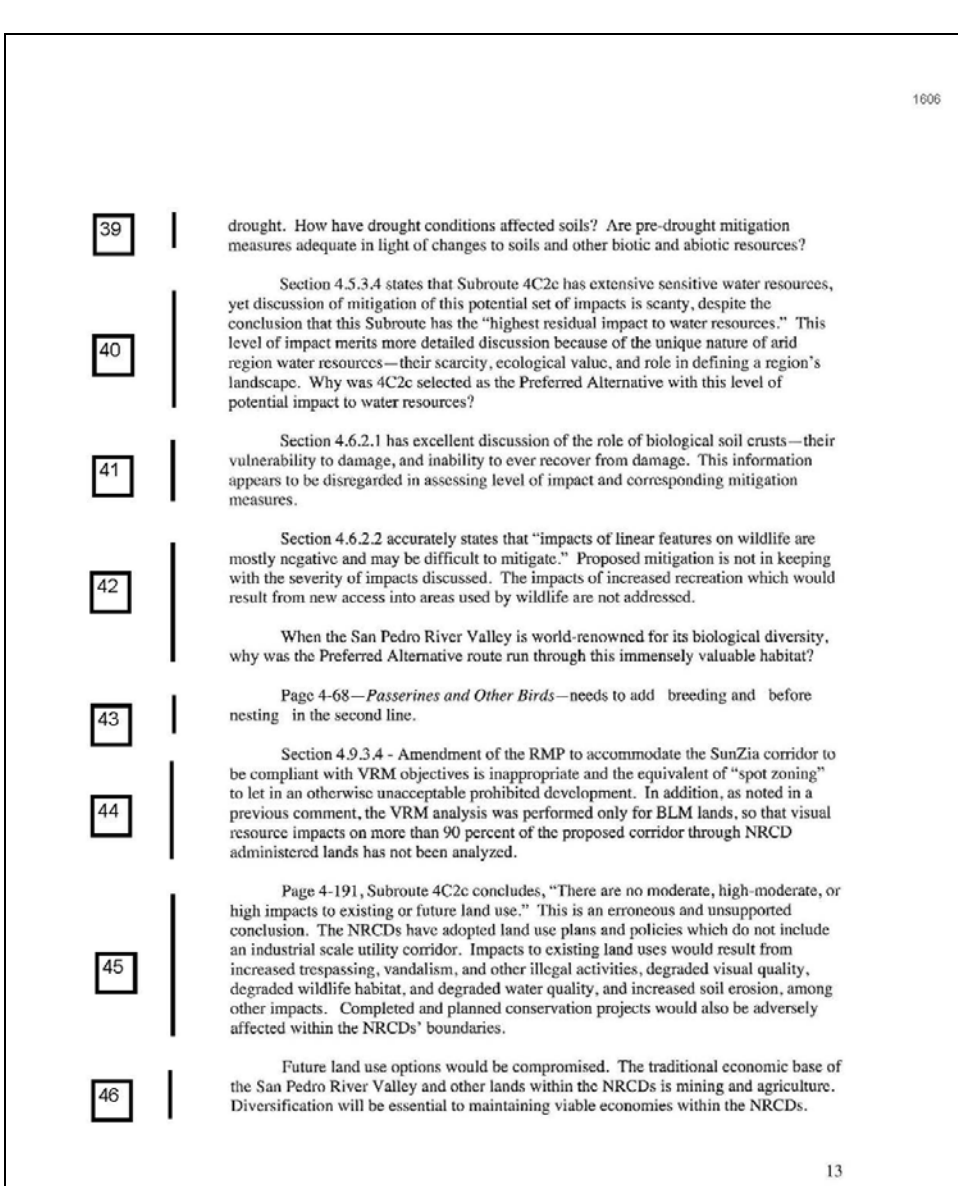
35	The impacts to resource values and importance within the San Pedro River Valley are described for each of the resources discussed in Chapter 4 of the DEIS; e.g., Earth Resources, Water Resources, Biological Resources, Socioeconomics.
36	As stated, "the primary impact associated with the construction and operation of Subroute 4C2c would be potential restriction of mineral resources… " However, as noted further in this discussion mitigation measure SE 8 (Structures would be placed to avoid, or allow conductors to span sensitive features…) would be effective to avoid or reduce these impacts.
37	Data for 100-year floodplains was obtained from FEMA for all Arizona counties within the Project area. This mapping includes all washes within the Project area that have been determined by FEMA to a 1-in-100 chance of flooding in a given year.
38	The USDA has not provided concurrence by letter.
39	The use of BMPs and standard and selective mitigation measures (Chapter 2, Section 2.5, pp. 2-85 to 2-95) along with the creation and implementation of the Stormwater Pollution Prevention Plan; Erosion, Dust Control, and Air Quality Plan; and Right-of-Way Preparation, Reclamation, and Monitoring Framework Plan would restore disturbed, erosion-susceptible areas to stability. Dust control is an integral part for the Project's mitigation strategy and is required under its regulatory framework. Along with the BMPs and standard and selective mitigation measures defined in the DEIS, and Erosion, Dust Control, and Air Quality Plan would be written and implemented as part of the Project Plan of Development. BMPs along with standard and selective mitigation measures would be applied to drought-affected soils as well as nondrought-affected soils. The goals for restoration, reclamation, and revegetation are the same, and would be effective in either drought or non-drought conditions.



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39 drought. How have drought conditions affected soils? Are pre-drought mitigation measures adequate in light of changes to soils and other biotic and abiotic resources?

40 Section 4.5.3.4 states that Subroute 4C2c has extensive sensitive water resources, yet discussion of mitigation of this potential set of impacts is scanty, despite the conclusion that this Subroute has the "highest residual impact to water resources." This level of impact merits more detailed discussion because of the unique nature of arid region water resources—their scarcity, ecological value, and role in defining a region's landscape. Why was 4C2c selected as the Preferred Alternative with this level of potential impact to water resources?

41 Section 4.6.2.1 has excellent discussion of the role of biological soil crusts—their vulnerability to damage, and inability to ever recover from damage. This information appears to be disregarded in assessing level of impact and corresponding mitigation measures.

42 Section 4.6.2.2 accurately states that "impacts of linear features on wildlife are mostly negative and may be difficult to mitigate." Proposed mitigation is not in keeping with the severity of impacts discussed. The impacts of increased recreation which would result from new access into areas used by wildlife are not addressed.

When the San Pedro River Valley is world-renowned for its biological diversity, why was the Preferred Alternative route run through this immensely valuable habitat?

43 Page 4-68—*Passerines and Other Birds*—needs to add breeding and before nesting in the second line.

44 Section 4.9.3.4 - Amendment of the RMP to accommodate the SunZia corridor to be compliant with VRM objectives is inappropriate and the equivalent of "spot zoning" to let in an otherwise unacceptable prohibited development. In addition, as noted in a previous comment, the VRM analysis was performed only for BLM lands, so that visual resource impacts on more than 90 percent of the proposed corridor through NRCD administered lands has not been analyzed.

45 Page 4-191, Subroute 4C2c concludes, "There are no moderate, high-moderate, or high impacts to existing or future land use." This is an erroneous and unsupported conclusion. The NRCDs have adopted land use plans and policies which do not include an industrial scale utility corridor. Impacts to existing land uses would result from increased trespassing, vandalism, and other illegal activities, degraded visual quality, degraded wildlife habitat, and degraded water quality, and increased soil erosion, among other impacts. Completed and planned conservation projects would also be adversely affected within the NRCDs' boundaries.

46 Future land use options would be compromised. The traditional economic base of the San Pedro River Valley and other lands within the NRCDs is mining and agriculture. Diversification will be essential to maintaining viable economies within the NRCDs.

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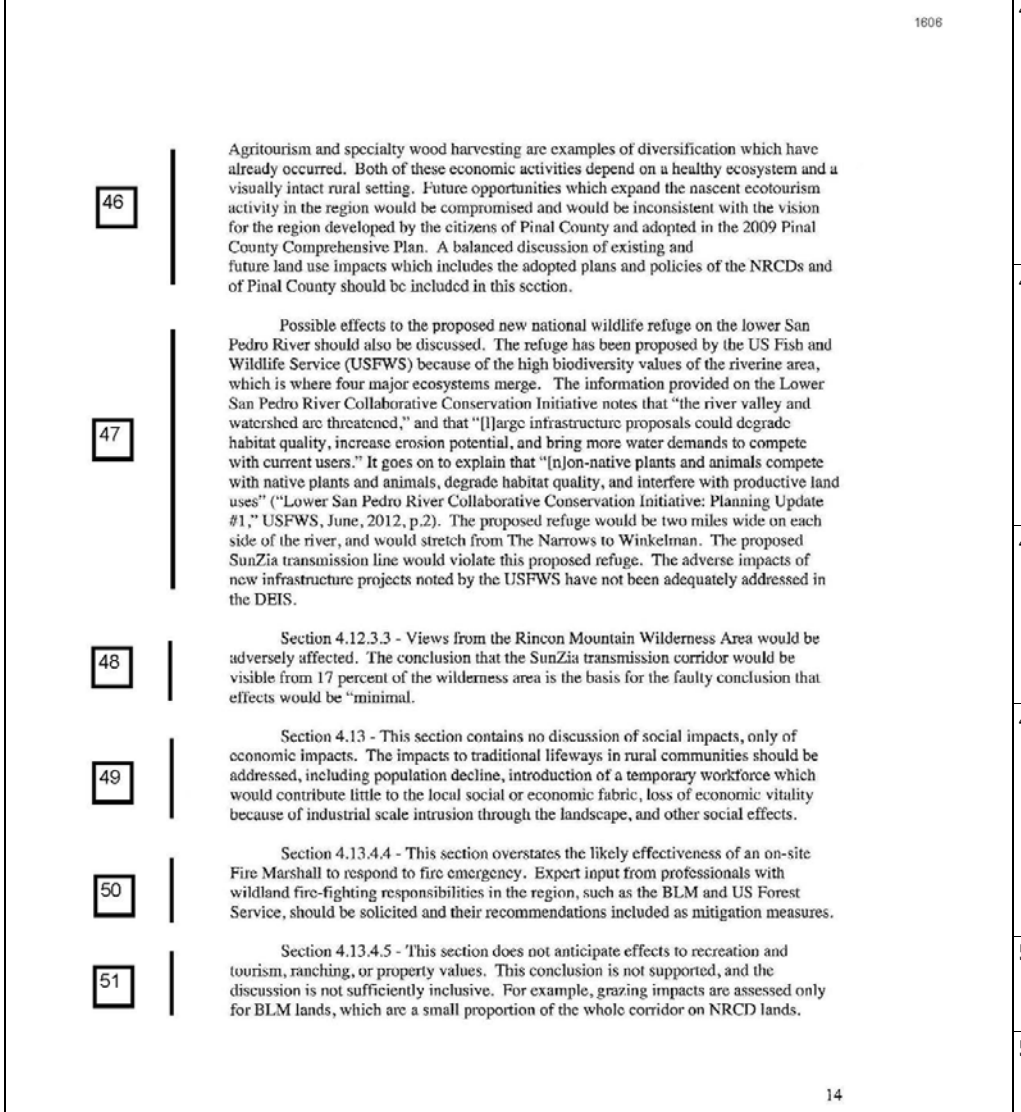
40	Subroute 4C2c was selected based on consideration of impacts to all resources.
41	Impacts to biological soil crusts would primarily be minimized by minimizing ground disturbance. Additional measures, such as salvage and proper storage of topsoils for restoration, are discussed in the POD and would be employed where appropriate. Further discussion of impacts was added to Section 4.3.2.3 Soil Resources: *Potential Project-related impacts to biological soil crusts are associated with the direct impacts of surface-disturbing activities such as blading of new access roads and indirect impacts of increased public recreational access of OHVs. Based on the rarity of ideal biological crust supporting soil types (Section 3.3.53) within the Project area it is unlikely that the Project would encounter and impact these unique resources. However, if biological soil crusts were identified during Project activities, existing standard and selective mitigation measures would be implemented in order to limit any impacts. Measures including restricting access to mapped and designated roadways and spanning and avoiding sensitive areas would reduce potential impacts.* *Desert pavements may occur within the Project area on low slope surfaces that have been undisturbed by previous ground-disturbing activities such as grazing or construction. Potential Project-related impacts to desert pavements are associated with the blading of new access roads on undisturbed surfaces which would break up the surface decreasing the stability of the desert pavement and increasing the potential for both water and wind erosion. Standard and selective mitigation measures such as restricting construction access to defined travelways would limit any potential direct impacts to those travelways; whereas, closing or reclaiming access roads that are not necessary for the operation and maintenance of the Project would limit indirect impacts from increased public recreation access.*
42	Proposed mitigation measures would be applied to the extent and intensity that is warranted by the resources that would be affected. Use of access roads by recreational users is discussed under cumulative effects, Section 4.17.4.6. Subroute 4C2c was selected based on consideration of impacts to all resources.
43	Comment noted
44	Please see response to Comment no. 27 regarding the visual analysis. Specific VRM classes identified in applicable RMPs would be modified by amendment where applicable. These VRM Classes only apply to BLM administered lands as there are no VRM classes assigned to other lands (i.e., state, private). The BLM would amend the RMP(s) for a particular route (i.e., agency preferred route).
45	Impacts to existing and future land uses are discussed in this section. The impacts described in the comment are impacts to other resources, thus the conclusion. Impacts to land uses from potential illegal activities are assumptions and are not discussed here. Visual impacts are discussed in the visual resource section. Impacts to wildlife habitat are discussed in the biological resources section. Impacts to water quality are discussed in the water resource section. Impacts to soil resources are discussed in the soil resource section.



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46 Agritourism and specialty wood harvesting are examples of diversification which have already occurred. Both of these economic activities depend on a healthy ecosystem and a visually intact rural setting. Future opportunities which expand the nascent ecotourism activity in the region would be compromised and would be inconsistent with the vision for the region developed by the citizens of Pinal County and adopted in the 2009 Pinal County Comprehensive Plan. A balanced discussion of existing and future land use impacts which includes the adopted plans and policies of the NRCDs and of Pinal County should be included in this section.

47 Possible effects to the proposed new national wildlife refuge on the lower San Pedro River should also be discussed. The refuge has been proposed by the US Fish and Wildlife Service (USFWS) because of the high biodiversity values of the riverine area, which is where four major ecosystems merge. The information provided on the Lower San Pedro River Collaborative Conservation Initiative notes that "the river valley and watershed are threatened," and that "[l]arge infrastructure proposals could degrade habitat quality, increase erosion potential, and bring more water demands to compete with current users." It goes on to explain that "[n]on-native plants and animals compete with native plants and animals, degrade habitat quality, and interfere with productive land uses" ("Lower San Pedro River Collaborative Conservation Initiative: Planning Update #1," USFWS, June, 2012, p.2). The proposed refuge would be two miles wide on each side of the river, and would stretch from The Narrows to Winkelman. The proposed SunZia transmission line would violate this proposed refuge. The adverse impacts of new infrastructure projects noted by the USFWS have not been adequately addressed in the DEIS.

48 Section 4.12.3.3 - Views from the Rincon Mountain Wilderness Area would be adversely affected. The conclusion that the SunZia transmission corridor would be visible from 17 percent of the wilderness area is the basis for the faulty conclusion that effects would be "minimal.

49 Section 4.13 - This section contains no discussion of social impacts, only of economic impacts. The impacts to traditional lifeways in rural communities should be addressed, including population decline, introduction of a temporary workforce which would contribute little to the local social or economic fabric, loss of economic vitality because of industrial scale intrusion through the landscape, and other social effects.

50 Section 4.13.4.4 - This section overstates the likely effectiveness of an on-site Fire Marshall to respond to fire emergency. Expert input from professionals with wildland fire-fighting responsibilities in the region, such as the BLM and US Forest Service, should be solicited and their recommendations included as mitigation measures.

51 Section 4.13.4.5 - This section does not anticipate effects to recreation and tourism, ranching, or property values. This conclusion is not supported, and the discussion is not sufficiently inclusive. For example, grazing impacts are assessed only for BLM lands, which are a small proportion of the whole corridor on NRCD lands.

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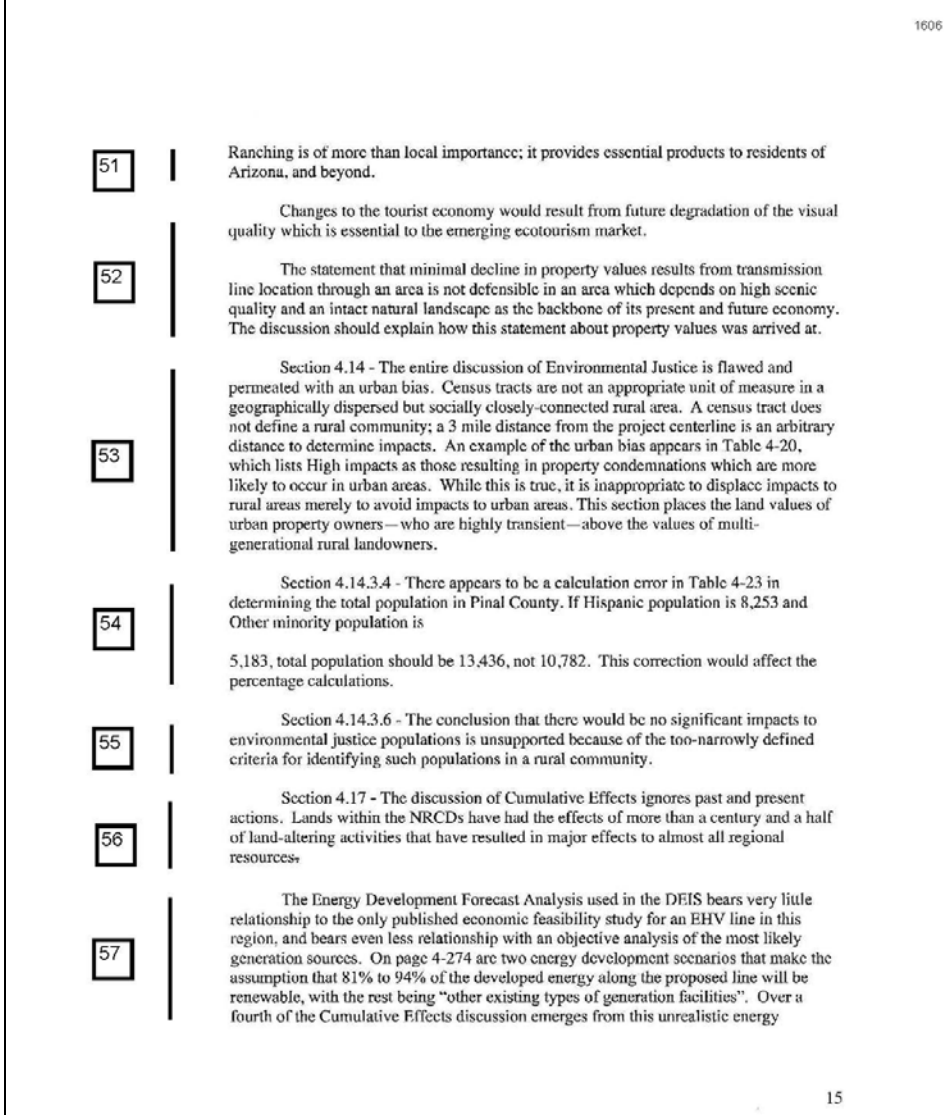
46	The results of the analysis of the Project's impact on land and resources uses were documented in Section 4.10 Land use and Recreation Resources. The dispersed recreational opportunities within the San Pedro River valley, which are activities that largely comprise ecotourism activities and agritourism, include hiking, bicycling, equestrian, fishing, birding and wildlife watching, and hospitality services (as described in Section 3.10.5.3 of the DEIS). Planned land uses as described in the Pinal County Comprehensive Plan, and other plans, have been considered in the analysis of impacts. No significant residual impacts to land use and recreation resources have been identified for the BLM Preferred Subroute 4C2c, as noted in Section 4.10.5.3.
47	The study area for the proposed National Wildlife Refuge (or Collaborative Conservation Initiative) is two miles wide, centered on the San Pedro River. The proposed refuge would not necessarily include all lands within that study area, and the USFWS continues to identify potential participants. Thus, the potential for the Project to affect that planning process exists, although no direct conflicts have been identified to date. The Project (BLM preferred alternative) would cross the southernmost one-half mile of the refuge study area, and would also cross a small portion of the western edge of the study area in a single location near Redington. Other alternatives to the north would potentially have a greater impact on the proposed refuge.
48	The viewshed analysis was run to determine where the project may be visible within the wilderness. The analysis demonstrated that the project would be visible from certain elevated, or superior, viewing locations (i.e., mountain tops and ridges). Dispersed recreation viewers may have views of the project from these ridges/mountain tops; however, ample opportunities for solitude within the Wilderness Area remain. Visual impacts to wilderness viewers were disclosed in Section 4.9.4.4.
49	The results of the analysis of social and economic impacts are described in Section 4.13 Social and Economic Conditions. It is acknowledged that impacts to rural communities may occur including traffic, noise, dust, and other temporary construction related activities in localized areas (sections 4.2, 4.3 and 4.15). As stated in Section 4.13.4.1, population impacts during the construction period would be minimal, a maximum of 206 workers per transmission line and 55 workers per substation site, and dispersed within transmission line corridors throughout 11 counties in two states, depending on construction phases. The operations employment would be minimal and spread between 3 cities in New Mexico and Arizona.
50	Fire-fighting requirements are described in the Fire Protection Plan, Appendix A4 of the Preliminary Plan of Development, which includes mitigation measures according to BLM and Forest Service professionals' recommendations.
51	Studies have been reviewed regarding potential effects to property values in proximity to transmission lines as stated in Section 4.13.4.5. Additional information regarding impacts to non-federal grazing lands has been included in the discussion in Section 4.10.5 of the FEIS. Also see response to Comment No. 46 with regard to recreation and tourism impacts.



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51 Ranching is of more than local importance; it provides essential products to residents of Arizona, and beyond.

Changes to the tourist economy would result from future degradation of the visual quality which is essential to the emerging ecotourism market.

52 The statement that minimal decline in property values results from transmission line location through an area is not defensible in an area which depends on high scenic quality and an intact natural landscape as the backbone of its present and future economy. The discussion should explain how this statement about property values was arrived at.

53 Section 4.14 - The entire discussion of Environmental Justice is flawed and permeated with an urban bias. Census tracts are not an appropriate unit of measure in a geographically dispersed but socially closely-connected rural area. A census tract does not define a rural community; a 3 mile distance from the project centerline is an arbitrary distance to determine impacts. An example of the urban bias appears in Table 4-20, which lists High impacts as those resulting in property condemnations which are more likely to occur in urban areas. While this is true, it is inappropriate to displace impacts to rural areas merely to avoid impacts to urban areas. This section places the land values of urban property owners—who are highly transient—above the values of multi-generational rural landowners.

54 Section 4.14.3.4 - There appears to be a calculation error in Table 4-23 in determining the total population in Pinal County. If Hispanic population is 8,253 and Other minority population is

5,183, total population should be 13,436, not 10,782. This correction would affect the percentage calculations.

55 Section 4.14.3.6 - The conclusion that there would be no significant impacts to environmental justice populations is unsupported because of the too-narrowly defined criteria for identifying such populations in a rural community.

56 Section 4.17 - The discussion of Cumulative Effects ignores past and present actions. Lands within the NRCDs have had the effects of more than a century and a half of land-altering activities that have resulted in major effects to almost all regional resources.

57 The Energy Development Forecast Analysis used in the DEIS bears very little relationship to the only published economic feasibility study for an EHV line in this region, and bears even less relationship with an objective analysis of the most likely generation sources. On page 4-274 are two energy development scenarios that make the assumption that 81% to 94% of the developed energy along the proposed line will be renewable, with the rest being "other existing types of generation facilities". Over a fourth of the Cumulative Effects discussion emerges from this unrealistic energy

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52	Visual impacts to recreation and agricultural resources are described in Section 4.9.3, Visual Resources Impact Analysis Results, which include recreation activities attributed to ecotourism. No significant visual or economic impacts to these activities have been identified. (Also see response to Comment No. 46).The statement regarding effects to property values is based on previous studies regarding potential effects to property values. The methodologies are described in individual studies (Chalmers et al. 2009, Delaney et al. 1992, Jackson 2010, and Jackson et al. 2010).
53	As indicated in Section 3.14 in the DEIS, EO 12898 (U.S. Department of Housing and Urban Development [HUD] 1994) requires federal agencies to address high and disproportionate environmental impacts on minority and low-income populations. Should potentially significant and adverse impacts attributable to the proposed Project fall disproportionately on these populations, environmental justice impacts would result. As noted in Section 4.14, Table 4-20 of the DEIS, High impacts occur in areas where the Project could create direct, long-term, and significant impacts to existing environmental justice populations. The methodology of assessing impacts to environmental justice populations was applied consistently within rural and urban areas. As stated in Section 4.14.2, although the type of impacts to rural and urban areas would be similar in most cases (e.g., the condemnation of a residence), the level of impact was also determined according to the proximity and density of the environmental justice population to the potential impact. For example, rural residential properties could experience moderate impacts from a distance of two miles of the transmission lines, while a residence just outside a mile from the lines could experience low impacts because of the existing lines or the presence of other structures commonly associated with a built urban environment. For these reasons populations within a 3-mile buffer are more likely to be affected by the Project (higher impacts occur up to a distance of three miles; noise and visual impacts dissipate at greater distances). Census tracts provide the most meaningful geographic unit to measure population components within the area of potential effects in rural areas, but the impacts are assessed according to inhabited structures within proximity to the Project corridor's centerline. The results indicate higher and disproportionate impacts to urban areas, due to higher population densities in proximity to the Project.
54	Data reported in Table 4-23 is accurate. As noted in Section 3.14.1 in the DEIS, individuals may identify both as Hispanic and other minorities, and therefore totals could exceed 100 percent of the population.
55	Please see Comment No.53.
56	As noted in the DEIS, Table 4-30 (Section 4.17, p. 4-251), cumulative impacts from farming and grazing activities have occurred in all portions of the study area, including the NRCD lands. Similarly, other land-altering activities such as the construction and operation of transportation and utilities have contributed cumulative impacts. Discussions of cumulative impacts to individual resources are included in Section 4.17.4.
57	The BLM developed the "Energy Development Forecast Analysis" (Section 4.17.3.3), consistent with BLM's approach in identifying "reasonably foreseeable development scenarios" (RFDs) in other NEPA processes, as "an attempt to provide an analytical tool…to provide a means to assess the cumulative effects of the types of renewable

development scenario. It is misleading to portray the project as primarily (81 to 94%) a renewable energy project, which is the justification for the SunZia project.

The High Plains Express (HPX) Project Stage 1 Feasibility Study was cited by the local NRCDs in two of their Information Quality submissions to the BLM. This cited document makes the statement, "For this study, the SunZia project was considered to be an integral segment of the HPX Project." The study concluded that the benefit/cost ratios for an EHV line in this region are most favorable with a renewable/fossil resource mix of nearly equal parts, due to the highly variable output of most renewable energy resources in the region. The conclusion was: "A 'balanced' scenario consisting of near equal amounts of fossil and renewable energy performed the best under a range of circumstances."

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The two facility scenarios presented by the BLM on page 4-274 bear little relationship to the optimum energy development scenario predicted by the HPX feasibility study, and thus bear very little relationship to what real investors and real regulators would accept as an economically practical energy development scenario. The BLM did not provide a feasibility study that would either support the economic feasibility of the SunZia project or contradict the conclusions of the HPX study. Thus the cumulative effects analysis has no basis in fact to support its justification of the SunZia project. The local NRCDs also cited the "imminently pending" non-renewable energy resources located along the proposed route. These include the planned and permitted 1000 MW Bowie plant, as well as existing natural gas powered plants, located in southern New Mexico and southern Arizona, that cannot expand production without increased transmission capacity. One of the limitations of an EHV line is the high expense of providing "on-ramps and off-ramps" (substations) for transmission access. The proposed SunZia project only has six substations, and three of them are located in the region of the natural gas powered plants. The highest estimate for non-renewable energy development in either of the scenarios presented by the BLM is 580 MW, which is a gross misrepresentation of the probable development of non-renewable energy resources resulting from this proposed increase in transmission capacity. The Bowie plant would contribute 1000 MW on its own.

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Since SunZia has not disclosed its "anchor customers", a term used in the 2011 Federal Energy Regulatory Commission (FERC) decision, and since FERC will regulate access for all other generation sources mostly on a first come/first served basis, the BLM is in no position to speculate that only 290 to 580 MW of non-renewable energy would be developed as a result of the proposed transmission project. By grossly underestimating the development of non-renewable resources, the BLM also grossly underestimated their cumulative effects, and appears to have not discussed cumulative effects of new fossil powered generation at all.

This lack of objective analysis is especially evident in the section on Global Climate Change, where the BLM makes the speculative statement that "... construction of either of the proposed options could potentially result in a net decrease in GHG [greenhouse gas] emissions relative to the No Action alternative" (page 4-280). This

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57	energy projects that may ultimately interconnect with the Project" (p. 4-269). The energy development scenarios were prepared based on overall potential for renewable resources in proximity to the proposed project, transmission facility options, and typical renewable energy development units (see DEIS p. 4-271). Further, the DEIS, p. 4-271, states that the energy development scenarios are reasonable based on physical potential (areas of renewable resource potential), RPS, development applications for leases to site renewable energy generation facilities on public land (federal and state), and interconnection requests (Table 1-2, illustrating the majority of interconnection requests in the study area are for renewable resources); all of this publicly available information supports an interest to develop primarily renewable resources. In response to development interest regarding a substantial available wind resource, the project includes a termination that is accessible to the wind-rich region and it is reasonable that a fair amount of transfer capacity may be comprised of energy from wind resources. The development scenarios consist of two options: 1) a 3,000 MW option; and 2) a 4,500MW option. The 4,500 MW option includes 3,000 MW (66% of the project) of DC technology which would flow east-to-west and originate in the area of high wind potential (estimates of over 11,900 MW of untapped resource, which is more than 3 times the capacity of the DC line). As proposed, the DC line would not have on and off ramps; it is conceivable that this line could be comprised entirely of wind generation. The HPX feasibility study was a joint effort to "evaluate the preliminary technical and economic feasibility" (emphasis contained in the original report). While the feasibility study acknowledged that a balanced scenario performed best under a range of circumstances, it also stated that the "results would indicate that HPX would provide economic benefits to customers in the HPX states over a variety of resource mixes and CO2 tax scenarios, with the sole exception of a fossil only scenario. As such, HPX's economic feasibility appears to be sufficiently positive and consistent with emerging public policy to warrant further investigations." The HPX report does not rule out the use of a higher percentage of renewable energy.
58	The energy development scenarios were prepared based on overall potential for renewable resources in proximity to the proposed project, transmission facility options, and typical renewable energy development units (see DEIS p. 4-271). Further, the DEIS, p. 4-271, states that the energy development scenarios are reasonable based on physical potential (areas of renewable resource potential), RPS, development applications for leases to site renewable energy generation facilities on public land (federal and state), and interconnection requests (Table 1-2, illustrating the majority of interconnection requests in the study area are for renewable resources); all of this publicly available information supports an interest to develop primarily renewable resources. In response to the comment regarding GHG emissions, the following paragraph in Section 4.17.4.2 in the DEIS (Cumulative Effects, Climate and Air Quality, Global Climate Change pg. 4-280) has been revised in the FEIS as follows: "With respect to climate change, renewable energy such as wind and solar have limited GHG emissions, as compared with a conventional fossil fuel-fired generating facility. *Current trends indicate that GHG emissions from generation facilities are declining because of regulations, fuel costs, and market demand. In general, further reductions in GHG emissions could accelerate in the future to the extent that renewable energy sources become more accessible to the electrical grid.*"

58 assertion by the BLM totally ignores the burgeoning role that natural gas is playing in the expansion of energy resources in the Southwest. The only scenario that has any probability of reducing GHG emissions is one in which no new fossil fuel resources are built and existing ones are replaced by renewable resources. No objective observer would conclude that the SunZia project will accomplish this particular goal. The identical unsubstantiated assumptions about energy development were applied to the SunZia Economic Impact Assessment Supplement on the Impacts of Potential Renewable Generation Facilities, found in Appendix G1. This portion of the SunZia economic benefits study is 121 pages in length, all based upon the unsubstantiated claim that 81%to 94% new energy development along the proposed line would be renewable. Because of the faulty assumption, this study only serves to reinforce a "renewable energy" marketing myth for the project.

59 The BLM's guidance on cumulative effects analysis ("Example of Cumulative Effects Analysis") has not been followed. An appropriate boundary should be determined for each resource. Normally, this is the watershed in a rural context. It can also be a community or a culturally valued landscape such as the San Pedro River Valley. Migratory wildlife such as birds might require a hemispheric context for appropriate analysis of cumulative effects. A Census tract or an arbitrary 3 mile limit from a centerline are not boundaries consistent with BLM guidance, which suggests numerous appropriate boundaries for resource analysis with emphasis on choosing those that will give the most complete picture of the effects. In the case of the desert tortoise, for example, this could be the entire range of the species, not merely its occurrence within the project area. In the case of the NRCDs, the District boundaries are appropriate because adopted plans and policies apply to all lands within the Districts.

Time frames for the duration of effects are scantily noted throughout the discussion.

Once the line is in place it will encourage further development. An adequate discussion of the cumulative effects likely to occur in the future as a result of the preferred alternative needs to be expanded to include, at the least, the effects of the power line on wildfire threats, urbanization, severe loss of riparian habitat, and groundwater overdraft.

Reasonably foreseeable actions should consider known opportunities and trends. The opportunities and trends for expanded tourism which requires intact ecosystems and high visual quality on lands administered by the NRCDs has not been considered.

60 Table 4-31, "Present, Future, and Reasonably Foreseeable Future Renewable Energy Projects" lists projects in Arizona with a collective total of only 50 MW of solar energy production, and only one wind energy project of unknown power production. These projects are not in the vicinity of the SunZia project. With such low production foreseeable, what is the need for the SunZia pair of 500 kV transmission lines, unless undisclosed non-renewable projects will make up the bulk of energy wheeled by SunZia? If non-renewable energy is going to be developed, as it is logical to conclude given the capacity of the proposed SunZia transmission lines, this too should be discussed in the

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59	The area of analysis for each resource is defined in Section 4.17.4 Cumulative Effects by Resource. For example as stated in 4.17.4.5 "The geographic scope of analysis for water resources is considered the local watershed… ". The energy development scenarios were defined in an effort to identify the most reasonable opportunities and trends. A thorough and comprehensive data search was conducted to identify past, present and reasonably foreseeable future actions as reported in Section 4.17.3.2 of the DEIS. A more precise definition of project features and specific time frames would require speculation, and would not provide any more meaningful analysis. Although future development within the cumulative analysis area as described in this study may take place if the reasonably foreseeable future actions are implemented, the proposed Project would not cause urbanization and related cumulative effects.
60	Each of the project proposals identified by the commenter would require a federal decision (i.e., right of way approval on federal land) and, therefore, would trigger a NEPA process. The status of the NEPA process for the four project proposals identified by the commenter is as follows: Southline • Notice of Intent (NOI) published in the Federal Register on April 4, 2012 • Scoping concluded on July 5, 2012; scoping report is dated September 2012 and is publicly available through the BLM's website at: http://www.blm.gov/nm/st/en/prog/more/lands_realty/southline_transmission.html (last accessed October 10, 2012) • The DEIS is under development and not yet available Centennial West • No proposed action has been publicly noticed in an NOI Lucky Corridor • No proposed action has been publicly noticed in an NOI • Power Network New Mexico • No proposed action has been publicly noticed in an NOI The cumulative impacts analysis in the DEIS (Section 4.17) accurately reflects the current status of the above project proposals, as there is insufficient information available about the listed project proposals to understand their purpose and need statements or potential environmental impacts. As a result, the DEIS reflects accurately that a meaningful analysis of reasonably foreseeable cumulative impacts involving the aforementioned proposals cannot be conducted at this time.

1606

60 cumulative effects. Further, the financial feasibility of the SunZia project should be addressed in the context of the renewable/non-renewable energy production which would be wheeled to give a clear picture of the cumulative effects of future and foreseeable energy development. If the proposed Southline Transmission Project is approved, what would be the effect on the number of 500kV lines the SunZia project would have?

61 Figure 4-3, "Qualified Resource Areas for Solar," has none in the vicinity of Subroute 4C2c. The area demarcated AZ-SO is west of Tucson and Eloy: a short transmission line from the AZ-SO QRA would be adequate to wheel power from this zone to the Pinal Central Substation, eliminating need for transmission lines through the San Pedro River Valley and other lands administered by the NRCDs. This would also be compatible with the Districts' suggestion of placing the line along I-10.

62 4.17.4.6 - The appropriate cumulative effects area for consideration of wildlife resources should be, at the least, the watershed and not the arbitrary limit of 4 miles each side of the SunZia corridor. The middle and lower San Pedro River Valley migratory bird corridor is unnecessarily restricted as the area of effect, when cumulative impacts to migratory birds will occur throughout the Southwest and beyond. When the SunZia corridor would impact Southwest Desert Willow flycatcher habitat, why is it the Preferred Alternative? Similarly, why was the Preferred Alternative selected when it could affect the Sonoran Desert Tortoise population in the San Pedro River Valley?

The discussion under *Construction* is good and notes the potential adverse effects of ground disturbance on invasive plants and erosion. However, mitigation does not seem commensurate with the level of effects, especially residual effects.

63 4.17.4.9 - This section accurately predicts the conversion of natural landscapes to industrial landscapes. Nonetheless, the severity of these effects in the context of the San Pedro River Valley is not adequately discussed, nor are mitigation measures in proportion, especially considering that the analysis is only for the small percentage of BLM lands which would be impacted by the SunZia project. A suggested mitigation is co-location of facilities and shared access. This does not carry the thought to its conclusion, that co-location doubles up on the effects because the SunZia corridor would in effect be growth inducing and attract additional development with increased impacts to resources. This should be discussed in the cumulative effects section. If the SunZia project is approved, there would be an EIS to tier off of. This cost-saving tiering for NEPA compliance would be an inducement for additional utilities to co-locate in the SunZia corridor.

64 Page 4-312 - Discussion of agricultural impacts notes loss of permitted grazing and reduction of agricultural production. The conclusion that this would not be significant is based on a regional context. This is an inappropriate resource boundary. Impacts to local agricultural producers should be analyzed.

65 There is also discussion of increased roads opening new access to OHV use. The discussion under *Construction* should be expanded to include effects to existing roads

18

1606	Response to Comment
61	Although other generation facilities could be constructed in Arizona, those projects would not fulfill the purpose and need for the Project, which is to transmit electricity from locations primarily in New Mexico and portions of southeastern Arizona to western power markets.
62	The introduction to the cumulative effects discussion for biological resources defines an appropriate study area, and notes the intercontinental scale of bird migration. Subroute 4C2c was selected based on consideration of impacts to all resources.
63	The Record of Decision that results from the SunZia EIS, would only provide approval of the right-of-way for the SunZia project. Although a future transmission line could for example be proposed to collocate with the SunZia project, it would be subject to the same level of analysis as the SunZia project.
64	Comment noted
65	Specific engineering of the transmission lines and access roads has not occurred. Impacts from increased illegal and legal OHV use of project and cumulative project access roads are unknown.

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such as pavement deterioration or rutting and erosion of unpaved roads (such as Redington Road) which would be subject to increased traffic and transport of heavy loads. Effects of required road reconstruction are not addressed.

65

There appears to be no discussion of traffic conditions, road networks or impacts to traffic or roads. This should be added as a separate section for analysis.

66

Section 4.17.4.13 - There is no discussion of the cumulative effects on existing ecotourism such as birding, wilderness use, hiking, and scenic drives, or future ecotourism which is an economic goal specified in the Pinal County Comprehensive Plan. This economic opportunity would be adversely affected by degradation of local quality of life and natural resources/biodiversity at the ecosystem level.

67

Section 4.17.5 - The cumulative effects of proposed RMP amendments cannot accurately be assessed when the baseline conditions detailed in the RMP are more than 20 years old.

68

Section 4.18.1.2 - *Soil Resources* concludes that there would be direct and indirect impacts to soil resources if the RMP is amended to allow a corridor in a designated avoidance area. Why has the Preferred Alternative been located on soils which will be impacted adversely? Slope is not adequately analyzed. The Preferred Alternative is on much steeper terrain, with greater potential for erosion, than other alternatives.

Section 4.18.1.4 - The San Pedro River crossing should be discussed specifically.

69

Section 4.18.1.7 - This section continues the very generalized discussion of visual effects to historic landscapes. A detailed discussion of historic landscapes and culturally valued landscapes in the San Pedro River Valley should be added. Moreover, the potential ecotourism and scientific importance of the cultural resource context of the San Pedro River Valley is inadequately discussed. It has a high value because of numerous sites which provide evidence of prehistoric occupation, such as the numerous mammoth kill sites. It also has high value because it is a relatively undisturbed landscape which still conveys, in large measure, a sense of place in which prehistoric and historic human activities occurred.

Section 4.18.1.12 - Discussion of potential (temporary) job creation should be balanced by discussion of permanent loss of tourism potential through landscape and resource degradation.

70

Section 4.18.1.13 - Whether or not a place contains residences is not the appropriate measure of environmental justice impacts. Rural occupants can be affected by regional-scale impacts to quality of life, and from incremental additional impacts to existing conditions.

19

1606	Response to Comment
66	See comment Nos. 46 and 52 with regard to the incremental impact of the Project to recreational resources. Cumulative impacts to economic resources including recreational activities associated with ecotourism have been identified in Section 4.17.4.13 of the DEIS. As stated cumulative impacts on recreational resources could occur as a result of utility scale solar and wind developments, which could in turn affect ecotourism. It is likely that ecotourism will continue to be a positive trend although the level of impact cannot be quantified without speculative assumptions regarding future levels of recreation and tourism within the analysis area.
67	Where RMP amendments have been identified, resource inventories were recently completed to verify and update baseline conditions identified in RMPs that included the visual resource inventory applicable to Visual Resource Management classifications.
68	Impacts to soil resources are common to all alternatives as ground-disturbance would occur along whichever route is chosen. The Preferred Alternative, Subroute 4C2c, is not the steepest subroute; four of the other subroutes, 4A, 4B, 4C1, and 4C2 all have longer distances crossing slopes greater than 35 percent (Table 3-16, pg. 3-37). [Note: I was unable to find Section 4.15.1.4 for soil resources.]
69	Impacts to cultural resources have been evaluated in Section 4.8.3.4; Section 4.18.1.7 addresses environmental effects of RMP amendments. With respect to RMP amendments within the San Pedro River Valley the BLM Preferred Alternative would not require amendments to either the Safford or Tucson on RMP. Section 106 of the NHPA requires that scientific importance of cultural resources be taken into consideration as one aspect of significance (Criterion D) in the evaluation of cultural sites for eligibility; eligibility recommendations/determinations are included in the analysis of sensitivity and potential impacts for all route alternatives in the DEIS. Please also see response to Comment No. 66 with regard to cumulative effects on ecotourism and recreation.
70	Please see response to Comment No. 53.

August 22, 2012

Delivered via electronic mail (NMSunZiaProject@blm.gov) and U.S. mail (with attachments).

Adrian Garcia, Project Manager
Bureau of Land Management, New Mexico State Office
Attention: SunZia Southwest Transmission Project
P.O. Box 27115, Santa Fe, NM 87502-0115

Re: SunZia Draft EIS Comments

Dear Mr. Garcia:

Please accept and fully consider these comments on the SunZia Draft Environmental Impact Statement (DEIS) on behalf of The Wilderness Society, Sonoran Institute, Audubon Rockies, Western Resource Advocates, New Mexico Wilderness Alliance, Arizona Wilderness Coalition, and Natural Resources Defense Council.

Introduction

Our groups support the environmentally responsible development of renewable energy and associated infrastructure, including transmission lines, on public and private lands as a means to reduce threats from climate change and achieve a clean energy future. This type of development is not appropriate everywhere, however, and places with sensitive and important natural and cultural resources should be protected from development of any kind.

Based on the incomplete information we have now, we think it is possible that there could be benefits to renewable energy from SunZia, but we have serious concerns regarding the relative amount and importance of those benefits, and even greater concerns regarding the environmental impacts SunZia would cause.

We engage in proposed transmission projects with several goals in mind: 1) gathering and sharing information on how the project will impact regional electricity generation, including potential to increase or decrease renewable energy and fossil fuel-based electricity generation; 2) gathering and sharing information on the likely impacts to the environment and other resources from construction, operation and maintenance of the project; and 3) providing constructive recommendations to managing agencies and project proponents that a) maximize likely benefits to renewable energy production and associated reductions in greenhouse gas emissions from the project, and b) avoid, minimize or off-set impacts from the project.

Though SunZia has been in the BLM National Environmental Policy Act (NEPA) permitting process for several years, a great deal of uncertainty remains regarding a number of key elements of the project, including: the purpose and need/potential renewable energy benefits of the project; the route that will be selected as the BLM-preferred alternative route in the Final EIS (FEIS); and the potential to avoid/minimize/mitigate impacts from construction, operation and maintenance of the project if it is approved. This uncertainty is compounded by the lack of detail on these elements in the DEIS, as well as the project proponent's opposition to the BLM-preferred alternative route in three locations in New Mexico and Arizona.

1

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	See following page(s)

The other proposed transmission lines in the region also add uncertainty to SunZia. There are at least four other major transmission lines proposed to carry at least some renewable energy west from central and eastern New Mexico (two intrastate, one to Arizona and one to California). It is unclear how these projects all relate to each other, and how their relative benefits and impacts compare.

These uncertainties notwithstanding, it is clear that all of the potential routes for SunZia would cause significant impacts to important natural resources, and these impacts are cause for significant concern to our organizations. We are committed to continuing our engagement until these questions can be answered.

Our comments focus on four key issues:

1) Purpose and need for SunZia
2) Environmental impacts and potential mitigation measures
3) Relative merits of other proposed transmission lines in the region
4) Need for additional opportunities for public input

I. Purpose and need for SunZia

The DEIS does not adequately describe or justify the purpose and need for this project. At a minimum, the BLM should address the following in revising this section:

a. Meeting energy needs in New Mexico, Arizona and California

1

The DEIS primarily discusses how SunZia will meet specific states' energy demands, relying on data provided by utilities in October 2010. This information has been subsequently updated through various integrated resource plans that detail what new energy resources utilities will likely pursue and factors influencing their mix of these resources.[1]

The DEIS does not adequately discuss how SunZia could facilitate the delivery of electricity products that would meet California's energy needs. Two important issues for SunZia are whether the line would help generators meet California's deliverability requirements for out-of-state renewable energy resources and whether the products shipped on the line would be cost-competitive. This discussion should explicitly consider how ongoing transmission planning and permitting efforts affect SunZia's linkages to California balancing areas, especially given the prioritization of critical congestion issues in this region.[2] Information provided in various Arizona

[1] For example: APS, http://www.aps.com/_files/various/ResourceAlt/2012ResourcePlan.pdf PNM, http://www.pnm.com/regulatory/pdf_electricity/irp_2011-2030.pdf; SRP, http://www.srpnet.com/about/pdfx/ResourcePlanFY2011.pdf; TEP, (http://files.shareholder.com/downloads/UNIS/2014411930x0x557199/806B57DB-06CF-4E46-BB16-124E53DCAC74/2012_TEP_IRP_1.pdf).

[2] The last completed national transmission congestion study was completed in 2009, available on line: http://congestion09.anl.gov/documents/docs/Congestion_Study_2009.pdf. The 2012 study is underway, and information on pre-study workshops and comments can be accessed: http://energy.gov/oe/services/electricity-policy-coordination-and-implementation/transmission-planning/2012-national.

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1	Recent projections from the Western Electricity Coordinating Council (WECC) in a table titled, "2022 Common Case Loads and RPS Requirements in WECC Region, Modified as needed for DG Assumptions" (http://www.wecc.biz/committees/BOD/TEPPC/20120106/Lists/Minutes/1/2022%20Renewables_FINAL_20120206.xlsx last visited October 2, 2012) show that approximately 55,765 GWh of new renewable generation will need to be added to the WECC Region (i.e., California, Nevada, Arizona, and New Mexico) between 2011 and 2022 in order to meet RPS. By comparison, DEIS Table 1-1 indicates a projected need for 58,654 GWh of renewables by 2020 and 70,794 GWh by 2025. The WECC analysis provides a more recent RPS analysis than Table 1-1, however, the WECC data presents similar results when compared with the DEIS data and largely substantiates the data that was presented in the DEIS. The deliverability, destination, and cost-competitiveness of the electricity carried on the proposed SunZia transmission system are subject to future negotiations. Subscription of SunZia's available transmission capacity is dependent on the customers of the transmission line (i.e., generators planning to sell energy) and their associated buyers (i.e., utilities, cooperatives, other energy consumers); therefore, it is unknown and speculative to predict which energy markets SunZia's future (but currently unidentified) customers may serve. Further, electricity on the transmission system is in a constant state of fluctuation and is dependent on a number of factors (e.g., changes in energy demand, addition of transmission, addition of generation resources, fossil generation, project closures due to economics, age and regulations etc.). Future electrical paths for electricity transported by SunZia will be determined based on available transmission capacity and contractual arrangements in place at the time SunZia becomes operational.

utilities' biennial transmission reports and 10-year transmission plans will be useful in this analysis.[3]

b. Addressing grid reliability and congestion

The DEIS does not clearly substantiate current congestion and reliability issues that SunZia will address. To document current or potential future reliability and congestion issues in a clear, credible fashion, the BLM should incorporate the most recent assessments conducted by Western Energy Coordinating Council, Southwest Area Transmission planning group, and Arizona utilities biennial transmission reports.[4] For example, the Arizona Corporation Commission's 2012 (7th) Biennial Transmission Assessment (BTA) now being drafted shows Arizona electricity demand forecasts 10 to 16% less than the previous transmission assessment in 2010 (6th BTA).[5] It would be helpful to compare available transmission capacity with potential demand in two regions: New Mexico and Arizona, and Arizona and California.

The DEIS does not evaluate the degree to which distributed generation, energy efficiency, demand-side management, or proposed line enhancements and additions may modify or shape congestion and reduce the need for new transmission lines like SunZia (for more information, see attached presentations (Attachments 1 and 2) on WECC's analysis of the impact of energy efficiency, distributed generation, and demand response on transmission and capacity needs.)

Finally, though there is the potential for significant amounts of wind resources to access the line, there is no discussion of how SunZia will manage the introduction of large amounts of this variable resource which may affect reliability.

c. Evaluating factors that may influence the energy mix that runs on SunZia

The DEIS does an inadequate job of describing short- and long-term factors that may influence the energy mix delivered by SunZia. It primarily relies on the status of interconnection requests in SunZia's project area as of September 2011, which provides a "snapshot" of potential SunZia customers. However, a fuller picture could be provided that gives the public a better understanding of the factors that may influence SunZia's financial viability as a transmission project and its ultimate energy mix. Given the current uncertainties and volatility surrounding energy markets, the DEIS should describe, at a minimum, the following factors:

- The forecast demand for new natural gas generation in relevant IRP documents and what, if any, transmission capacity would be needed to accommodate it;
- Planned coal plant retirements in the region and potentially available transmission capacity;
- A description of federal and state policies that could stimulate development of wind and solar energy resources that might access SunZia;

[3] Prior biennial reports at: http://www.azcc.gov/divisions/utilities/electric/Biennial.asp. Information on current biennial reports and 10-year transmission plans: http://www.azcc.gov/Divisions/Utilities/Electric/BTA-Index.ASP.
[4] WECC's 10-year plan at: http://www.wecc.biz/library/StudyReport/Wiki%20Pages/Home.aspx. SWAT reports and presentations at: http://www.westconnect.com/planning_swat.php.
[5] At: http://www.azcc.gov/divisions/utilities/electric/Biennial.asp.

3

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2	The proposed project is an interstate transmission project between New Mexico and Arizona. Accordingly, the discussion of congestion relates to the area in which the project is proposed and the local congestion. As stated in the DEIS, "The [Department of Energy] reported that the transmission path in southern New Mexico was highly congested in 2006, and remained highly congested at publication of their National Electric [Transmission] Congestion Study in 2009" (p. 1-6). The transmission path within southern New Mexico that is referenced in this study is known as Path 47. Two existing 345 kV transmission lines within Path 47 include one that is operated by El Paso Electric (EPE), and another by Public Service Company of New Mexico (PNM). The available transfer capacity on EPE's transmission line is 0 MW in either direction (available online at http://www.oatioasis.com/EPE/EPEdocs/ATCV1701.10.pdf at pp. 58-59, last accessed on 10-12-12); PNM's transmission line has 0 MW of available transfer capacity in the east-to-west direction and 170 MW of available transfer capacity in the west-to-east direction (available online at http://www.oatioasis.com/PNM/PNMdocs/2012_atcdoc-pnm2-posted.pdf at page 58 last accessed on 10-12-12). In November 2010, the NM Subcommittee of the Southwest Area Transmission (SWAT) planning group presented an analysis, entitled, "SWAT Oversight Committee, NM Subcommittee Update, November 2010" (available online at: http://westconnect.com/filestorage/SWAT_NM_Nov16__2010_Phx.pdf last accessed October 11, 2012) that illustrates areas of renewable resource interconnection requests within proximity to Path 47, which has severely limited available transfer capacity, and the SunZia Project study area. This November 2010 presentation identified over 3,000 MW of renewable resource potential within transmission service provider interconnection queues. The WECC three phase rating study for the SunZia Project demonstrated that the addition of a minimum of 3,000 MW of transfer capability would not negatively impact power flows on Path 47, which was identified by DOE as a highly congested path (available online at: http://www.wecc.biz/committees/StandingCommittees/PCC/TSS/Shared%20Documents/Projects%20Undergoing%20Regional%20Planning%20Rating%20Review/SunZia%20Southwest%20Transmission%20Project/SunZia_%20Phase%202_Study%20Report_Final.pdf last accessed on October 11, 2012). Although the DEIS cites a report prepared by the Department of Energy, the commenter recommends that recent assessments from Western Energy Coordinating Council, Southwest Area Transmission planning group, and Arizona utilities biennial transmission reports should be cited. The commenter goes on to cite the Arizona Corporation Commission's Biennial Transmission Assessment (BTA) as a source of information for electricity demand. The current BTA, which is in draft format, "shows Arizona electricity demand forecasts 10 to 16% less than the previous transmission assessment in 2010 (6th BTA)." While the current draft BTA forecast's that demand is less than that identified in 2010, the current forecast continues to show an overall increased demand in electricity. The DEIS Section 2.3.3.3, Alternatives to New Transmission, discusses distributed generation, demand side management including energy efficiency), and existing transmission system upgrades and explains why each of these alternatives were considered, but ultimately screened from further consideration because they could not meet the purpose and need of the SunZia Project.
3	As noted within the comment, there are several market factors that influence the potential energy mix and viability of the Project. Further, as noted in the comment, there are

- Trends in the cost and pricing of renewable and non-renewable resources that may influence development of these resources proximate to SunZia; and
- FERC's May 2011 order regarding SunZia's allocation of ownership rights and capacity to negotiate rates.

The BLM's initial characterization of the SunZia project conveyed the incorrect impression that SunZia would exclusively provide for the transmission of renewable energy power—a claim that few transmission lines could ever make. In this rapidly-changing energy market, exact assessments about the clean energy merits of a proposed transmission project are unrealistic. However, the DEIS could do much more to incorporate readily available information to create a more credible picture of the demand for renewable energy resources, how available transmission capacity constrains their development, and the degree to which SunZia is a viable solution to this issue in the context of region-specific infrastructure policy and market factors. In educating the public about this project's purpose and need, it is incumbent upon the BLM to provide as much information as possible to allow the public to arrive at a thoughtful conclusion about the project's merits.

Finally, to provide increased confidence that the line will principally carry renewable energy, BLM and SunZia should provide continuous, transparent updates on potential subscribers to the line and explicit statements of generation intent for the line in a manner that does not violate the Federal Energy Regulatory Commission (FERC) open access rules. This suggestion was adopted by developers of the Gateway West line who are now posting updated subscriber information online.[6]

II. Environmental impacts and potential mitigation measures

SunZia is a proposal for up to two 500 kV transmission lines running ~500 miles from central New Mexico to between Tucson and Phoenix, Arizona. The potential routes would impact a wide variety of sensitive ecosystems, including the Rio Grande River Corridor, Citizens' Wilderness Inventory units in central and southern New Mexico, the large, unfragmented, and ecologically valuable San Pedro and Aravaipa watersheds east of Tucson, and many more.

The scope of this project demands an extremely careful and robust evaluation of both the potential impacts from various routes as well as mitigation measures that might be employed to avoid, minimize or mitigate impacts. Unfortunately, as described below, the DEIS lacks these details. This lack of detail makes it very difficult to evaluate SunZia, and underscores the importance of our recommendations for additional opportunities for public input in Section IV of this letter. The comments below are based on the best available information at this time.

a. Inadequacy of details regarding environmental impacts and mitigation measures in the DEIS

A comparison between the DEIS for SunZia and the DEIS for the proposed Gateway West transmission line from Wyoming to Idaho illustrates some of the details that should be included in the Supplemental EIS and/or supplemental documents recommended in Section IV.

[6] Available at: http://www.pacificorp.com/tran/tp/eg/gw.html

1614	Response to Comment
3	uncertainties and volatility surrounding the energy market. The five bulleted "factors" referenced in the comment, are acknowledged but although these factors are generally too speculative to provide a meaningful analysis. The BLM developed the "Energy Development Forecast Analysis" (DEIS Section 4.17.3.3), consistent with BLM's approach in identifying "reasonably foreseeable development scenarios" (RFDs) for oil and gas actions, as an "an attempt to provide an analytical tool...to provide a means to assess the cumulative effects of the types of renewable energy projects that may ultimately interconnect with the Project" (DEIS p. 4-269). As stated in the DEIS (p. 1-7), "Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services..." and reiterated on p 4-274 of the DEIS, "As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service." Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, "it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation" (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity. As stated in the DEIS (p. 1-9), "Pursuant to FERC Order 888, it is noted that the locations of individual proposed projects or transmission line interconnections cannot be identified to third parties by transmission owners." Although the specific location of the proposed projects cannot be identified, DEIS Table 1-2 provided an illustration of generation interconnection requests, including size and fuel, that were identified through transmission interconnection queues of load serving utilities within SunZia's path and represent projects located in counties which could reasonably interconnect with the existing system or SunZia. The purpose of this illustration was to provide an example of need for transmission service within the study area.

4 The Gateway West DEIS details more specific information about numerous potential impacts of the project, including numbers of acres and the type of vegetation that are impacted, as well as the planned widths of access roads that will be constructed. NEPA requires BLM to complete these types of analyses and present this information in the DEIS so that the public can understand the potential impacts of the proposed project, and so that mitigation measures that the agencies devise can be better tailored to minimize impacts to affected wildlife species and landscapes.

5 The two DEISs differ not only in the level of descriptive specificity, but also in the level of biological analysis conducted prior to DEIS completion. The SunZia DEIS relies on remote assessment of biological impacts, using literature reviews and geospatial data to estimate the likelihood of overlap with species and potential impacts upon them. In contrast, the Gateway West DEIS, in response to concerns raised by BLM and USFS biologists during scoping, improves upon this level of analysis by also beginning with a literature review but going on to describe a variety of upfront biological field surveys (Gateway West DEIS 3.10-8 and 3.11-11). These were used to identify, for example, locations of burrowing owl and raptor nests and Columbian sharp-tailed grouse and greater sage-grouse leks, among other important biological resources. Furthermore, the Gateway West DEIS includes clear lists of detailed issues raised during scoping (Gateway West DEIS 3.10-4 and 3.11-4), which help frame and structure the subsequent impacts analyses and help clarify what analysis gaps remain. The SunZia DEIS lacks such a feature and only describes scoping issues in general terms, for example: "[A] large volume of scoping comments identified environmental resources within the study area; especially relating to migratory birds, listed species, habitat fragmentation, preservation of wilderness and wilderness-like areas, cultural resources, aesthetics, private property, property values, and local economies" (SunZia DEIS 4-245).

Another way that the type of analysis included in the Gateway West DEIS exceeds that included in the SunZia DEIS is with the discussion of impacts and mitigation to the ESA candidate species yellow-billed cuckoo. The Gateway West DEIS acknowledges that construction impacts in suitable riparian habitat could disturb the bird, and proposes to mitigate that impact through having "a preconstruction survey for the yellow-billed cuckoo [that] must be conducted at any proposed crossing of suitable habitat. If birds are detected within 1 mile of the centerline (within existing habitat), construction must not occur until the young have fledged or the nest is abandoned." (Gateway West 3.11-79) In contrast, the SunZia DEIS states "construction activities within riparian areas should take place outside of the nesting period for the cuckoo, which is approximately May through September." (SunZia 4-74) The Gateway DEIS looks at a finer scale of impacts to the species – surveys are proposed to be conducted to ensure that the species wouldn't be impacted. The SunZia DEIS has a general plan to just avoid the area for a few months and start construction in September, with no requirement to complete field surveys to confirm whether or not birds are nesting there.

Analysis of potential impacts to golden eagles and potential mitigation measures is also inadequate in the SunZia DEIS. The description of impacts and mitigation measures includes no details regarding the specific impacts that are expected and when construction would be avoided. For example, the DEIS state, "impacts to Golden Eagles could include construction disturbance of breeding or nesting behavior, potentially resulting in nest abandonment. Seasonal avoidance of construction in Golden Eagle nesting areas would minimize disturbance of the birds." (4-72)

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1614	Response to Comment
4	The area of ground disturbance would be highly correlated with the length of transmission line as reported in the DEIS by each vegetation type. The FEIS includes additional analysis of estimated ground disturbance by vegetation type (Table 4-15). Widths of access roads and other design features are described in Chapter 2, but will not be identified as occurring at a particular location until final engineering and access road design is complete.
5	Some resources considered in the Gateway West DEIS, particularly Sage-grouse leks, are discrete locations and are highly sensitive to the presence of transmission lines. Similarly sensitive resources requiring early surveys were not identified within the SunZia DEIS study area, or were avoided during initial siting (e.g. springs). Field information was gathered for river crossings and selected other locations during the development of the SunZia DEIS. The majority of surveys for protected species are conducted and specific mitigation measures are defined as determined by the USFWS in Section 7 consultation for ESA. Remote sensing and existing data are adequate and appropriate methods to use for impact assessment and decision-making for many resources. Mitigation measures for individual ESA-listed and candidate species, including the Yellow-billed Cuckoo, are determined during the NEPA process and Section 7 consultation. However, surveys for all ESA-listed and candidate species would be conducted as appropriate, as stated in the standard mitigation measures presented in the DEIS. Dates for seasonal avoidance of Golden Eagle nesting sites (or other sensitive locations) are expected to vary across the large study area. Final details on any necessary surveys and dates of avoidance of those locations will be developed with appropriate agencies, and included in the final POD.

5 The inadequacy of these details underscores the importance of our recommendations in Section IV for additional analysis and publication of a Supplemental EIS and/or supplemental documents for public review and comment prior to publication of a FEIS.

b. Environmental impacts

Our groups have submitted scores of pages of comments detailing the important natural resources and values in these areas that would be impacted by SunZia, and we incorporate those comments by reference. Other groups have also submitted hundreds of pages of additional comments with additional details.

We do not repeat that information in these comments. Rather, we have highlighted areas of ongoing concern and new issues that have arisen since we submitted scoping comments in 2010. We also propose actions that are needed to address these impacts.

New Mexico impacts

6
- **Rio Grande River Corridor:** the Rio Grande River corridor, and in particular the Middle Rio Grande, is a critical flyway for migrating birds and many other species. For this reason, we recommended in scoping comments that BLM use an alternative that would run down the east side of the White Sands Missile Range (WSMR) and cross the Rio Grande River near Las Cruces, where impacts would be much lower. The routes east of the WSMR have been dropped from consideration in the DEIS. All of the remaining alternatives would cross the Rio Grande in the Middle Rio Grande region between the Bosque del Apache and Sevilleta National Wildlife Refuges, an area that is particularly important for wildlife. Audubon New Mexico has significant expertise on these issues and is submitting detailed comments including information on the importance of this area for wildlife habitat and the likely impacts of SunZia. Though these impacts may be impossible to fully mitigate, Audubon New Mexico's comments also include recommendations on mitigation measures that should be employed if SunZia is approved and built in this area. We support the information and recommendations in Audubon New Mexico's comments and ask that BLM fully consider and address them.

7
- **Citizens' Wilderness Inventory units:** many of the potential routes would intersect Citizens' Wilderness Inventory (CWI) units inventoried by the New Mexico Wilderness Alliance (NMWA). These areas have been found by NMWA to have "wilderness characteristics," including naturalness, solitude and the opportunity for primitive recreation. Beyond these core values, these lands also provide important wildlife habitat, cultural and scientific resources, invaluable ecosystem services including clean air and water, important economic benefits, and many other resources and values. The sensitive nature of these lands and their resources and values makes protection critical and transmission development on them inappropriate. The CWI units intersected by the SunZia routes in New Mexico (by SunZia subroute number) are:
  - E101: Cibola Canyon, Stallion, Sierra de la Cruz
  - E133: Veranito
  - A111 and A112: Padillo Gonzales
  - E90 and A90: Stallion
  - A160: Chupadera Wilderness Addition

1614	Response to Comment
6	Comment noted
7	Text has been modified in Section 3.12.4 of the FEIS as follows: Last sentence of first paragraph on page 3-266 *"Citizen's Wilderness Inventory Units have been reviewed as part of the inventory of Lands with Wilderness Characteristics on BLM lands."* The following CWI units would not be crossed by the preferred route: Padillo Gonzales, Chupadera Wilderness Addition, Penasco Canyon, Sierra de las Uvas, Nutt Mountain, and Goodsight Mountains. The Preferred Route would traverse the Cibola Canyon, Stallion, Sierra de la Cruz, and Lordsburg Playas North CWI units; however, there are existing unpaved roads within these units. The Preferred Route would also cross the Veranito but it would be located along the edge of this CWI unit where there are existing unpaved roads. The Magdalena Mountains (2 and 3), Nutt Mountain, and Massacre Peak CWI units would be crossed by the Preferred Route; however, it would parallel an existing 345 kV transmission line and associated access roads within these units. Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to be inventoried to identify lands with wilderness characteristics, which would support a citizen's wilderness inventory proposal. Within the SunZia study corridors, the Nutt Mountain LWC unit in New Mexico was identified based on the manual (MS-6310), and would be crossed by one of the SunZia transmission line alternative routes (not the Preferred Route) Also as stated in the FEIS (Section 3.12.4) as follows: "According to the current inventory conducted in *September 2012, the Preferred Route would cross an LWC unit that was identified, located adjacent to the Stallion WSA*."

7

- E211: Magdalena Mountains 2
- A161B: Magdalena Mountains 3
- A270: Penasco Canyon
- A430: Sierra de las Uvas
- A361 and A400: Nutt Mountain
- A481: Goodsight Mountains
- A430 and A500: Massacre Peak
- B150a: Lordsburg Playas North

GIS data for the NMWA CWI units is attached (Attachment 3).

Arizona impacts

8

- **Aravaipa Canyon:** Aravaipa canyon is a remote area with significant environmental resources that could be impacted by SunZia. Aravaipa is part of a significant set of roadless areas running from the Apache Reservation down to Cochise County in a 100 mile long swath. An analysis by The Nature Conservancy found that the Aravaipa Canyon region is the second largest unfragmented area in the Arizona and New Mexico region, second only to the Grand Canyon. Impacts to these resources and the Aravaipa Creek watershed are of serious concern. Specific impacts of concern include:
  - *Direct habitat fragmentation* caused by installation of the transmission line and any associated roads and infrastructure;
  - *Indirect habitat fragmentation* caused by:
    - *Increased access.* The creation of an infrastructure corridor of any kind (even with helicopter installation of transmission towers) is likely to increase human access and use, especially through off-road vehicle use, including illegal off-road vehicle use. If a road or trail is built for construction, operations and maintenance of the line, these impacts will likely be increased greatly. Experience with access along other Rights of Way has shown that controlling human access is extremely difficult.
    - *Invasive species.* Disturbance is known to provide increased spread of invasive species and associated habitat impacts.
    - *Preventing use of fire as a habitat management tool.* Natural fires and controlled burns are critical to maintaining the habitat in the Aravaipa Canyon region. However, fire is generally suppressed as both a reliability and health and safety risk near existing transmission lines. There are federal, state, and local regulations and plans that require projects to comply with fire suppression and prevention around power lines. The North American Electric Reliability Council standards and Institute of Electrical and Electronics Engineers standards apply to all transmission lines that are critical for electrical reliability in the region. The Sunrise Powerlink project has mitigation measures (BIO-APM-9, Sunrise Powerlink FEIS B-110) that involve brush clearing around the transmission tower structures for fire protection that adheres to those national standards as well as to US Forest Service land management plans and California Code of Regulations. (Sunrise Powerlink FEIS D.15 47-52) SunZia plans to suppress fire through buffer zones of at least 100 feet around conductors and vegetation treatment. (SunZia DEIS 4-107,108).

7

1614	Response to Comment
8	The DEIS acknowledges the potential impacts as discussed. Regarding fire management in particular, the Sunrise Powerlink project was constructed in a highly fire-prone landscape. Although fire is also a vital part of ecosystem function in many vegetation communities in the SunZia project area, fires in the Aravaipa Canyon area are much lower in frequency and intensity than those used as an example for Sunrise Powerlink. Vegetation management to reduce the risk of unplanned fire occurrence as well as the threats fire would pose to the project itself will be in compliance with all applicable standards and policies, at an appropriate level for affected vegetation communities, while attempting to minimize impacts to those vegetation communities. The use of fire would not necessarily be precluded by the presence of a transmission line, but the Project would require consideration during development of a burn plan. The DEIS does not state that there would be a 100-foot buffer around conductors where fire would be suppressed. Rather, this section discusses the minimum distances at which fire crews must remain from an energized line to avoid the risk of electrocution, creating an area where fire suppression could not occur.

- *Erosion and other watershed impacts to Aravaipa Creek and its tributaries, as well as the San Pedro River.*

9

- **San Pedro Valley:** The San Pedro Valley has significant habitat value for avian and mammal species and has been a conservation priority for both public agencies and NGOs for several decades. The biological resources in this valley are particularly rich due to the convergence of the Sonoran and Chihuahuan deserts and the presence of numerous Sky Islands which act as connectors between the temperate Rocky Mountains and the semi-tropical Sierra Madres. Impacts to these resources and the San Pedro River and watershed are of serious concern. Specific impacts of concern include:
  - *Direct and indirect habitat fragmentation.* Many of the same impacts described for the Aravaipa Canyon route would occur with the San Pedro Valley route. The overall fragmentation impacts would be worse for the Aravaipa route because the Aravaipa region is currently the second largest unfragmented area in the Arizona and New Mexico region.
  - *Erosion and other watershed impacts to the San Pedro River.*
  - *Impacts to the recently proposed Lower San Pedro National Wildlife Refuge.*
  - *Impacts to parcels of land that are currently being managed protectively to mitigate for impacts from other development.*

10

- **Citizen-Proposed Wilderness units:** subroutes B153a and B153b intersect the corner of the Pinaleños Citizen-Proposed Wilderness (CPW) unit. The inventory of Arizona CPW units is maintained by the Arizona Wilderness Coalition (AWC), and these units have the same values as the CWI units described above. SunZia should not intersect the Pinaleños CPW unit or other CPW units. GIS data for the AWC CPW units is attached (Attachment 4).

c. Mitigation measures

The scale and intensity of likely impacts from SunZia demand a robust and comprehensive approach to mitigation if the project is approved and constructed. These efforts must include all the steps in the mitigation hierarchy, including avoiding impacts wherever possible, minimizing unavoidable impacts through the use of best management practices on-site, and off-setting remaining impacts through off-site, compensatory mitigation.

11

As part of its NEPA analysis, BLM must evaluate the direct, indirect and cumulative impacts of the SunZia project, regardless of whether those impacts occur to federal lands or lands owned by states. "Case law interpreting NEPA has reinforced the need to analyze impacts regardless of geographic boundaries." Council on Environmental Quality Guidance on NEPA Analyses for Transboundary Impacts[7] (July 1, 1997), citing, *Sierra Club v. U.S. Forest Service*, 46 F.3d 835 (8th Cir. 1995); *Resources Ltd., Inc. v. Robertson*, 35 F.3d 1300 and 8 F.3d 1394 (9th Cir. 1993); *Natural Resources Defense Council v. Hodel*, 865 F.2d 288 (D.C. Cir. 1988); *County of Josephine v. Watt*, 539 F.Supp. 696 (N.D. Cal. 1982). BLM is also obligated to evaluate mitigation for such effects. 40 C.F.R. § 1502.16 Accordingly, in evaluating mitigation measures, BLM should evaluate how to mitigate impacts on these other lands. The mitigation measures required for the Desert Sunlight solar project

[7] Available at: http://www.gc.noaa.gov/documents/transguide.pdf

1614	Response to Comment
9	Habitat fragmentation, erosion, and other direct or indirect impacts that may occur are discussed in the DEIS throughout Section 4.6 for each affected resource, and noted in the discussion of alternatives (Section 4.6.5). Access road design and maintenance would minimize the risk of erosion, and some roads may be closed to public use at the discretion of the landowner. Locations for potential road closure would be identified in the final POD. The proposed Lower San Pedro River Collaborative Conservation Initiative (discussed in Section 4.6.4.6), which may include lands managed as a National Wildlife Refuge, continues to be developed. The current proposal is based on a study area 2 miles on either side of the river, beginning at The Narrows to the south and extending northward to the Gila River confluence beyond the SunZia project area. All alternatives for SunZia would cross portions of the Collaborative Conservation Initiative study area. The BLM preferred alternative would cross the study area approximately 0.5 miles north of The Narrows, near the southern boundary of the study area. After crossing the river, the BLM preferred alternative is located more than 2 miles from the river, with the exception of a brief approach to 1.9 miles near the town of Redington. Impacts to biological resources from SunZia would not change as a result of establishing the Collaborative Conservation Initiative.
10	Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to go through an inventory for lands with wilderness characteristics which would support a citizen's wilderness inventory proposal. The only potentially affected LWC inventory units in Arizona that were identified based on the manual (MS-6310) are within the Muleshoe area and would be crossed by Subroute 4C1 (not the BLM Preferred Route). Subroute 4A (links B153a and B153b) would not cross any portion of the Pinaleños CPW unit according to GIS data provided. Also please see text change regarding LWC inventory response to Comment No. 7.
11	The intent of the mitigation measures included in Section 2.5 of the DEIS is to provide for implementation of mitigation for the entire project inclusive of non-federal and federal lands.

11 approved by BLM in 2011 provide an example of mitigation for both air quality and water quality impacts to non-federal land and landowners.[8]

We recommend a suite of mitigation measures that may apply in numerous places along SunZia below. **However, we want to emphasize that given the very significant impacts from SunZia along some parts of the route, it may be impossible to fully mitigate some impacts. Further, given our outstanding questions regarding the purpose and need for SunZia and our serious concerns about the impacts of SunZia, we emphasize that all of these recommendations are only applicable if the BLM chooses an action alternative as the preferred alternative in the Final EIS.**

12 Avoidance

- **Route selection:** If the BLM chooses an action alternative as the preferred alternative in the FEIS, the BLM should select a final BLM-preferred route that avoids as many impacts as possible. As noted above, avoiding impacts may be impossible in some areas where limited viable route options remain (such as in the Tucson area). Based on the information we have now, and among the routes included in the Draft EIS, we have identified the following subroutes that would have (relatively) lower impacts:
  - *Rio Grande River crossing:* as noted in Section II (b) of these comments, Audubon New Mexico is submitting detailed comments on the Rio Grande River crossing and we support their recommendations on this issue.
  - *Avoidance of CWI units in New Mexico:* SunZia should not cross CWI units. In some cases all of the routes in the DEIS would cross CWI units, increasing the importance of minimizing and off-setting impacts if they cannot be avoided. Among the routes presented in the DEIS, the BLM should select the following subroutes as the BLM-preferred route in the FEIS:
    - I-25 crossing north of Truth or Consequences: the BLM should select subroute A260 to avoid intersecting the Penasco Canyon CWI unit (subroute A260 are in the BLM-preferred route in the DEIS).
    - Subroutes north of the proposed Midpoint Substation: the BLM should select subroutes A400, A440, A530, and A520 to avoid intersecting the Nutt Mountain, Sierra de las Uvas, and Goodsight Mountains CWI units (subroutes A400, A440, A530, and A520 are in the BLM-preferred route in the DEIS). The BLM should also adjust subroute A400 to avoid the Nutt Mountain CWI unit (subroute A400 currently runs along the edge of the Nutt Mountain CWI unit). The BLM should also adjust subroutes A440 and A530 to avoid the Massacre Peak CWI unit (subroutes A440 and A530 run along the edge of the Massacre Peak CWI unit).
    - Lordsburg Playa area: the BLM should select subroutes B160a and B160b to avoid intersecting the Lordsburg Playas North CWI unit (subroutes B160a and B160b are in the BLM-preferred route in the DEIS).

[8] Available at: http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/palmsprings/desert_sunlight.Par.39828.File.dat/ROD%20appendix%201%20protest%20resolution.pdf

1614	Response to Comment
12	The BLM Preferred route would avoid the CWI units in New Mexico and Arizona as described by this comment. The BLM Preferred Alternative in Route Group 3 has been changed to include links B160a and B160b as modified and would avoid intersecting Lordsburg Playas North CWI unit. Micro-siting would be conducted and documented as part of the final POD after engineering and surveys have been completed.

12

- *Avoidance of CPW units in Arizona:* SunZia should not cross CPW units. The BLM should adjust subroutes B153a and B153b to avoid intersecting the Pinaleños CPW unit.

- **Route micro-siting:** As described in Section IV below, the BLM should include detailed maps of the BLM-preferred route in the FEIS, as well as a draft Construction, Operation and Maintenance Plan. The BLM should analyze specific impacts along the BLM-preferred route in the FEIS and adjust the route through micro-siting to avoid impacts to sensitive resources.

13

Minimization

If the BLM chooses an action alternative as the preferred alternative in the Final EIS, the BLM should require use of Best Management Practices (BMPs) on-site to minimize impacts. There are numerous resources with additional information on best practices for mitigation for transmission line planning and development. These include, but are not limited to the following:

- The Avian Power Line Interaction Committee's "Suggested Practices for Avian Protection on Power Lines" *available at:* http://www.aplic.org/uploads/files/2643/SuggestedPractices2006(LR-2).pdf;
- Edison Electric Institute's "Mitigating Bird Collisions with Power Lines" *available at:* http://www2.eei.org/products_and_services/descriptions_and_access/mitigating_birds.htm
- Western Resource Advocates' "Smart Lines" report, *available at:* http://www.westernresourceadvocates.org/energy/smartlines.php; and
- Wild Utah Project's "Best Management Practices for Siting, Developing, Operating and Monitoring Renewable Energy in the Intermountain West" *available at:* http://wildutahproject.org/files/images/BMP%20for%20Renewable%20Energy-2012-WUP.pdf

In addition to these broadly applied BMPs, the BLM should also require the use of the following minimization techniques where applicable:

14

- **Helicopter installation:** Helicopter installation has been used to limit impacts in construction of numerous transmission lines, including the Sunrise Powerlink. The American Electric Power Company was the first to use helicopters in large-scale transmission line construction in 1960, and the use of this approach has continued in other projects. Helicopter installation can provide the benefit of eliminating the need to build roads or trails and eliminating the need to use vehicles or off-road vehicles to access tower pad sites for construction, operation and maintenance of the transmission line. In the Sunrise Powerlink project, helicopters, specifically the Erickson air crane, were used to install the transmission tower structures for an estimated 70% of the transmission route, which eliminated the need for cranes and road construction. In addition, the use of micropile foundations to drill holes for the tower structures and reduce the use of cement greatly reduced impacts to the site locations. The BLM should require helicopter installation with no construction of roads or trails and no use of vehicles or off-road vehicles to access tower pad sites in areas where habitat fragmentation is major concern. Specifically, the BLM should require the use of helicopter installation for all subroutes going through the Aravaipa and San Pedro watersheds if SunZia is approved and the final route traverses these areas.

10

1614	Response to Comment
13	Best management practices (BMPs) have been included in the list of mitigation measures to be implemented as conditions of BLM's Right-of-Way grant.
14	Helicopter installation (Selective Mitigation Measure-SE 13) would be a requirement in specific areas as defined in the final POD.

15

- **Minimizing road and trail construction:** where significant impacts exist but do not require helicopter installation, the BLM should require that road and trail construction be minimized, and that any temporary roads be fully reclaimed.
- **Limiting access to any roads and trails that are constructed:** where roads and trails are constructed, aggressive measures should be taken to limit access, including fencing, locked gates, use of natural terrain features to limit access, and security patrols.

16

- **Use of bird diverters:** The BLM should require the use of bird diverters and other mitigation measures to decrease the likelihood of bird strikes in areas of known heavy bird use. These include, but are not limited to:
  - The Rio Grande River crossing
  - The Aravaipa Canyon region
  - The San Pedro Valley

Off-site, compensatory mitigation

Because SunZia will cause significant impacts that cannot be fully avoided or minimized, on-site, the BLM should require a comprehensive off-site, compensatory mitigation plan. Compensatory mitigation plans have been required for several transmission lines, including the Sunrise Powerlink. San Diego Gas & Electric (SDG&E), the Sunrise Powerlink project proponent, provided funding to purchase and manage nine parcels of unique mitigation lands of nearly 10,000 acres of sensitive habitat in San Diego and Imperial Counties. These lands would compensate for impacts to sensitive vegetation and wildlife species during construction, operation, and maintenance of the project. In addition, at least 185 acres of offsite mitigation lands were purchased and will be managed by SDG&E to offset impacts in the Cleveland National Forest (Sunrise Powerlink Habitat Acquisition Plan and Habitat Management Plan, page 2).[9]

The compensatory mitigation plan for the SunZia project should include, but not be limited to, the following elements:

17

- **Purchase and permanent protection of private or State Trust lands:** the BLM should require the applicant to purchase land of high conservation value and protect it through a conservation easement or another mechanism that affords permanent protection from development of any kind. This should be required for impacts to numerous areas along the routes, including but not limited to:
  - *CWI and CPW units intersected by SunZia routes in New Mexico and Arizona:* if the BLM-preferred alternative in the FEIS includes any routes that intersect CWI or CPW units, the BLM should require purchase and protection of lands as mitigation.
  - *The Aravaipa and San Pedro watersheds and region:* There are nearby state trust lands that have been previously identified as having significant conservation values, including approximately 36,000 acres in the Catalina-Galiuro corridor, which could be subject to conservation acquisition as part of a mitigation strategy.

18

- **Administrative protection of BLM or Forest Service lands:** the BLM and Forest Service should amend relevant land use plans to add administrative protective designations to land

[9] Available at: http://www.cpuc.ca.gov/environment/info/aspen/sunrise/otherdocs/Habitat_Acqsn_Habitat_Mgmt_Plan_092110.pdf

1614	Response to Comment
15	Limiting road construction and access (Selective Mitigation Measure-SE 2) would be a requirement in specific areas as defined in the final POD.
16	Use of bird diverters (Selective Mitigation Measure-SE 15) would be a requirement in specific areas as defined in the final POD.
17	Off-site compensatory mitigation may be considered in addition to mitigation measures identified in the DEIS.
18	BLM resource plan amendments are described as part of the proposed action in the DEIS Section 2.6. Additional administrative designations may be considered for off-site compensatory mitigation.

of high conservation value. The management prescriptions for these protected areas should preclude development of any kind. These protections could include:

- *Area of Critical Environmental Concern designations*
- *Managing BLM-identified lands with wilderness characteristics to protect those characteristics*
- *Special Recreation Management Area designations with a focus on non-motorized use*

III. Relative merits of other proposed transmission lines in the region

There are numerous other proposed transmission lines in the region that may also carry renewable energy. These proposals include:

- Southline from Las Cruces, NM to Tucson, AZ;
- Centennial West Clean Line from central NM to the Los Angeles, CA area;
- Lucky Corridor from eastern NM to near Taos, NM; and
- Power Network NM from the same wind resource area where SunZia would originate (northeast of Corona, NM) to the Rio Puerco substation northwest of Albuquerque, NM.

It is unclear how these projects all relate to each other, and how their relative benefits and impacts compare. All of these proposals are at much earlier phases of the permitting process than SunZia, with only Southline having initiated the NEPA process and completed scoping. For this reason, we have even less information about these proposals than we do about SunZia.

Even with our limited information, however, it is apparent that some of these proposals could provide some of the same purpose and need/benefits that SunZia purports to provide. That said, the differences between the proposals and the potential that there could potentially be benefits to constructing all of them indicates that they should not simply be considered "interchangeable".

One thing that is clear is that some of the specific impacts that SunZia would cause could be avoided with these proposals – for example, none of these projects propose routes through the Aravaipa Canyon region or the San Pedro Valley.

That said it is likely that all of these proposals will face significant challenges related to siting and impacts, and any of them could face fatal flaws related to impacts, interconnection, financing, or other issues. These challenges could be equal to or greater than those facing SunZia – or they could be less than those facing SunZia.

We include discussion of these other proposals to emphasize that in general, managing agencies like the BLM, transmission developers, transmission planners like the Western Electricity Coordinating Council, stakeholders, and others involved in transmission and electrical generation planning should work to advance projects that provide the most benefits with the fewest environmental and other costs.

We do not have enough information on these other proposals to make a judgment at this time regarding whether any of them might provide similar purpose and need/benefits at lower environmental and other costs than SunZia. We urge careful consideration of all options as more information is developed and these other proposals advance further. Further, we urge that if and

12

1614	Response to Comment
19	The cumulative impacts analysis in the DEIS (Section 4.17) accurately reflects the current status of the above project proposals, as there is insufficient information available about the listed project proposals to understand their purpose and need statements, benefits, or potential environmental impacts.
20	Comment noted

20 when a decision can be made, that managing agencies advance projects that provide the most benefits and fewest environmental and other costs.

21 **IV. Need for additional opportunities for public input**

Because of SunZia's significant environmental and community impacts and uncertainty related to the final route selected, and because of the inadequate details in the DEIS described in Section II (a) of this letter, we strongly encourage the BLM to release either a Supplemental EIS and/or one or more supplemental documents for public review and comment prior to the release of a Final EIS. The Supplemental EIS and/or supplement documents should provide, at a minimum, the following information:

1. Detailed maps of the final BLM-preferred route. These maps should be detailed enough to allow for public comments addressing impacts on the likely location of transmission towers, access roads, and associated construction, operation, and maintenance activities proposed for the project.
2. A detailed draft Construction, Operation, and Maintenance plan that describes proposed on-site features and activities designed to mitigate the project's environmental and community impacts from the final BLM-preferred route.
3. A detailed draft off-site mitigation plan that describes proposed land protection and restoration goals—including, but not limited to, specific land acquisition, land exchanges, conservation designations, and associated mitigation funding commitments—to mitigate the project's environmental and community impacts from the final BLM-preferred route.

Release of the Supplemental EIS and/or supplemental documents should be accompanied by a public review and comment period of at least 90 days and public meetings where the public is granted the opportunity to provide oral comments and have these included in the public record.

Conclusion

In closing, we want to reiterate that based on the incomplete information we have now, we think it is possible that there could be benefits to renewable energy from SunZia, but we have serious concerns regarding the relative amount and importance of those benefits, and even greater concerns regarding the environmental impacts SunZia would cause.

In addition to the above recommendations, our organizations are committed to continuing to explore the full range of mitigation strategies that may help minimize this project's environmental and community impacts. To that end, we will be providing the BLM, project proponents, and members of the public with additional information and recommendations throughout the process of finalizing the project's EIS and ROD. We invite continued dialogue and suggestions from the BLM, project proponents, and members of the public as to how we could be most helpful in this regard.

Sincerely,

Alex Daue, Renewable Energy Associate
The Wilderness Society
1660 Wynkoop St., Suite 850

1614	Response to Comment
21	The BLM Preferred route has been selected as modified, and is documented in the FEIS. Public comments received during the 90 day public review of the DEIS have been addressed in the FEIS. Detailed maps, POD, and mitigation plans will be subject to final approval by BLM and other land management agencies and local authorities prior to construction.

Denver, CO 80202

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Attachments

- Attachment 1: 2011 TEPPC Study Program – Study Results. *PC4 - High Energy Efficiency, Distributed Generation and Demand Response*. Keegan Moyer, Associate Staff Engineer, WECC. July 12th, 2012
- Attachment 2: High DSM/DG Case: Approach for DG Estimates. Arne Olson, Energy and Environmental Economics (E3) on behalf of Lawrence Berkeley National Laboratory (LBNL). November 11, 2011
- Attachment 3: GIS data for New Mexico Wilderness Alliance Citizens' Wilderness Inventory units (on CD-ROM)
- Attachment 4: GIS data for Arizona Wilderness Coalition Citizen-Proposed Wilderness units (on CD-ROM)

14

1614	Response to Comment
	See following page(s)

1649

From: Benavides, Lewis (Human Resources)
To: BLM_NM_SunZia_Project
Cc: "eosterreich@dchieftain.com"; "dannyv87801@yahoo.com"; "plaramillo@co.socorro.nm.us"; "mgriego@co.socorro.nm.us"; "banava@co.socorro.nm.us"
Subject: SunZia route thru Willow Springs Ranch, Socorro County, New Mexico
Date: Wednesday, August 22, 2012 3:54:50 PM
Attachments: image001.png
WRSPOA SunZia.doc

Willow Springs Ranch Phase I Owners Association, Inc.

August 22, 2012

Bureau of Land Management
New Mexico State Office
SunZia Southwest
Transmission Project
P.O. Box 27115
Santa Fe, New Mexico 87502-

Reference: SunZia route thru Willow Springs Ranch
Socorro County, New Mexico

Dear Mr. Garcia:

The Willow Springs Ranch Phase I Owners Association, Inc. (WSRPOA) members have previously voted in 2010 to oppose the proposed route thru our Ranch development in Socorro County, New Mexico. The vote was communicated to SunZia then and it appears to have had no consideration or effect whatsoever since the published preferred route is thru the center of our owners ranches.

Please be advised that the route following A161 is totally unacceptable to the WSRPOA ranch owners, the route following A161b is more acceptable if the transmission line must go thru the WSRPOA at all. We propose the line follow 161a, then go to line 161b, then reconnect with line E211 continuing its northward track past the west side of Socorro.

1

SunZia Map Source: http://www.sunzia.net/map_pdfs/sz_map_nm_deis.pdf

Ranch owners over the last dozen years have purchased their lots new, totally a combined investment of several millions of dollars. WSRPOA landowner's main goals are ranching, retirement, investment, primary and secondary homes; these massive 300 hundred foot plus dual transmission lines thru the center of our development will completely destroy our owner's property values.

All our property owners - not just the owners the actual lines are proposed to cross thru will be affected. All property owners within visual sight of these massive lines will have greatly reduced land values - affecting appraisals, resale's, and esthetic looks.

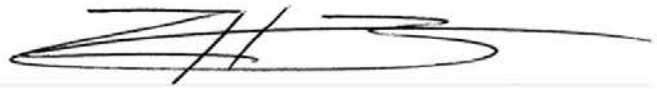
1649	Response to Comment
1	The Preferred Route (Link A161) would parallel an existing 345kV transmission line which would provide a reduction in ground disturbance because the existing transmission road would be used for Project construction. The alternative (Link A161b) would result in higher visual impacts because it would be located within close proximity to a cluster of residences in the Willow Springs subdivision where there is no existing utility corridor as discussed in Section 4.9.3.1 of the DEIS. Link A161b would impact the Socorro Springsnail in the Torreon Spring complex as described in Section 4.6.4.5 of the DEIS.

1649

2 Accordingly, the Willow Springs Ranch Phase I Owners Association, Inc. members have voted at its July 28, 2012 annual meeting to seek all remedies available to the association, including pursuing legal rights to protect and fairly compensate all affected members; if SunZia selects the route following A161 thru the center of Willow Springs Ranch.

Thank you for including this letter into the public commentary record and we hope our proposed minor route change will get adequate consideration.

Regards,



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Socorro, NM 87801

New Mexico Governor Susana Martinez
490 Old Santa Fe Trail
Room 400
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1649	Response to Comment
2	Comment noted

From: David J Simon
To: BLM_NM_SunZia_Project
Subject: Rio Grande Chapter, Sierra Club Comments on DEIS
Date: Wednesday, August 22, 2012 4:25:53 PM
Attachments: Rio Grande Chapter Sierra Club SunZia DEIS comments 82212.doc

Please accept the attached letter as public comment on the DEIS for the SunZia Transmission Project. Thank you!

--
Dave Simon
Director, Rio Grande Chapter
Sierra Club
142 Truman Street, N.E., Suite C-1
Albuquerque, NM 87108
505-243-7767 office
505-280-2319 cell
david.j.simon@sierraclub.org
http://nmsierraclub.org/

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Via email to: NMSunZiaProject@blm.gov

August 22, 2012

Adrian Garcia, Project Manager
Bureau of Land Management, New Mexico State Office
P.O. Box 27115
Santa Fe, NM 87502-0115

Re: Draft Environmental Impact Statement, SunZia Southwest Transmission Project

Dear Mr. Garcia:

The Rio Grande Chapter of the Sierra Club (Rio Grande Chapter) appreciates this opportunity to comment on the SunZia Draft Environmental Impact Statement (DEIS). The Rio Grande Chapter represents approximately 7,000 members throughout New Mexico and El Paso, Texas.

Introduction and Project Need

SunZia proposes up to two 500 kV transmission lines running ~500 miles from central New Mexico to between Tucson and Phoenix, Arizona. These power lines would carry electricity—including, but not exclusively—electricity generated from renewable sources such as wind, solar, and geothermal.

The Sierra Club supports environmentally responsible development and use of renewable energy. The Sierra Club recognizes that expanded generation and use of renewable energy often requires associated infrastructure, including transmission lines. New and enhanced transmission lines can be critical to the development of renewable energy by accessing the interstate power grid and bringing power to market.

The Rio Grande Chapter believes that our nation's long-term energy future depends on a combination of improved energy conservation and efficiency, dispersed/distributed renewable energy generation, and renewable energy generated from large-scale facilities. But there is no question in our mind that further development of wind and solar power in New Mexico will benefit from increased transmission capacity, and that the ability to move renewably-generated electricity in New Mexico long distances will also benefit numerous states that seek to meet any form of a renewable power standard.

The Rio Grande Chapter believes that new transmission capacity embodied by the SunZia project is needed in New Mexico. Only a small percentage of New Mexico's renewable energy potential has been tapped and there are already significant "bottlenecks" with respect to the capacity to handle renewable energy and integrate it into the interstate power grid. This is certainly true with respect to the area in proximity to SunZia's eastern terminus in New Mexico,

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where increased generation of renewable energy has made a nice start and has substantial promise.

1 While the Rio Grande Chapter supports the concept of SunZia and appropriate new transmission capacity, we also believe that DEIS should have done more to assess and describe future demand for electricity (especially electricity generated from renewable energy), how available transmission capacity constrains their development, the degree to which SunZia is a viable solution to this issue in the context of regional infrastructure and markets, and how SunZia relates to and/or integrates with other proposed transmission lines in the Southwest and how this situation affects the case for or against SunZia.

2 The Rio Grande Chapter also recognizes that the SunZia project, if constructed, would not exclusively carry electricity generated from renewables. We favor provisions in any final decision, however, that would set a requirement for the project to carry a specified minimum percentage of renewably-generated electricity (e.g. no less than 50 percent in initial contracting and through the first five years after completion). The percentage of renewably-generated electricity carried by SunZia should escalate over time to be at least 80 percent within 10 years. We also oppose the use of SunZia, if it is constructed, for the transmission of electricity generated from any new coal-fired power plant.

Evaluation of Projected Impacts

The Sierra Club supports use of public lands for transmission lines, when and where transmission lines are justified, new lines benefit renewable energy and not coal-fired power plants, power lines can be constructed with acceptable impacts on the environment, and provided that all appropriate mitigation measures are taken.

The potential routes for SunZia would impact a wide variety of sensitive ecosystems and natural /cultural resources, including the Rio Grande corridor and flyway, areas included in BLM wilderness study areas and areas proposed for wilderness in citizen-developed plans, numerous cultural areas (including archaeological sites, national historical trails, and traditional use areas), and other ecologically important areas in New Mexico and Arizona.

In general, these Rio Grande Chapter comments on the DEIS are mostly focused on the New Mexico portions of the proposed project (Route Section 1 and portions of Route Section 3), though we share concerns voiced by the Grand Canyon Chapter of the Sierra Club, The Wilderness Society, and Defenders of Wildlife regarding the importance of avoiding significant impacts to the environment in particularly important areas in Arizona, such as the Aravaipa Valley, the San Pedro Valley, and citizen wilderness inventory units along Route Section 4.

3 New transmission lines should, whenever possible, utilize corridors already established for highways, railroads, and pipelines, and/or share previously established electric transmission corridors. The BLM preferred alternative consists of the combination of three subroutes—1A1, 3A1, and 4C2c. Approximately 56 percent (296 miles) of the route would be parallel to existing or designated utility corridors, including 220 miles parallel to existing transmission lines. The

1755	Comment Response
1	Section 1.4 of the DEIS describes existing transmission congestion, and the need for increased available transmission capacity to meet future energy generation development. Also, recent projections from the Western Electricity Coordinating Council (WECC) in a table titled, "2022 Common Case Loads and RPS Requirements in WECC Region, Modified as needed for DG Assumptions" (http://www.wecc.biz/committees/BOD/TEPPC/20120106/Lists/Minutes/1/2022%20Renewables_FINAL_20120206.xlsx last visited October 2, 2012) show that approximately 55,765 GWh of new renewable generation will need to be added to the WECC Region (i.e., California, Nevada, Arizona, and New Mexico) between 2011 and 2022 in order to meet RPS. By comparison, DEIS Table 1-1 indicates a projected need for 58,654 GWh of renewables by 2020 and 70,794 GWh by 2025. The WECC analysis provides a more recent RPS analysis than Table 1-1, however, the WECC data presents similar results when compared with the DEIS data and largely substantiates the data that was presented in the DEIS. The deliverability, destination, and cost-competitiveness of the electricity carried on the proposed SunZia transmission system are subject to future negotiations. Subscription of SunZia's available transmission capacity is dependent on the customers of the transmission line (i.e., generators planning to sell energy) and their associated buyers (i.e., utilities, cooperatives, other energy consumers); therefore, it is unknown and speculative to predict which energy markets SunZia's future (but currently unidentified) customers may serve. Further, electricity on the transmission system is in a constant state of fluctuation and is dependent on a number of factors (e.g., changes in energy demand, addition of transmission, addition of generation resources, fossil generation, project closures due to economics, age and regulations etc.). Future electrical paths for electricity transported by SunZia will be determined based on available transmission capacity and contractual arrangements in place at the time SunZia becomes operational.
2	As stated in the DEIS (p. 1-7), "Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services..." and reiterated on p 4-274 of the DEIS, "As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service." Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, "it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation" (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity.
3	Comment noted

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3 Rio Grande Chapter commends BLM for selecting a preferred alternative in which the major portion of the project would be would be constructed along established utility corridors where existing access is available.

The Rio Grande Chapter also recognizes that in its preferred alternative, BLM has tried to avoid direct, major conflicts with important land uses such as designated wilderness and wilderness study areas, national parks and monuments, special management areas, wildlife refuges and other conservation areas, densely populated areas, and military installations.

The preferred alternative, however, does not avoid and minimize all impacts on critical conservation areas, historic/cultural resources, special management areas, and wildlife. The Rio Grande Chapter recognizes that no route is perfect and that not all impacts can be avoided, but in order to support an action alternative for SunZia in a final environmental impact statement, the Chapter requests further modification of the BLM's preferred alternative regarding route selection and mitigation.

Route Selection
The Rio Grande Chapter is particularly concerned about the BLM-preferred route in two main areas:

4 Rio Grande Corridor: Since the best environmental options—alternatives that would have crossed the river south of Elephant Butte and/near Las Cruces and traversed lands closer to White Sands Missile Range—have been eliminated from consideration, the BLM-preferred route proposes to cross the Rio Grande five miles north of the town of Socorro, NM; the Alternate Route proposes to cross the river near San Antonio. Though the more northern of these two crossing is relatively better, **both of these options would have unacceptable impacts on wildlife, viewsheds, and cultural values.**

The Middle Rio Grande Valley has precious and irreplaceable resources. The special, uniqueness of this region was described in a report commissioned and recently released (July 11) by Secretary of the Interior Ken Salazar. The *Report of the Secretary's Committee for the Middle Rio Grande Conservation Initiative* identified the regional, national and international significance of the area, which includes its habitat and wildlife, open space, rich cultural heritage (e.g. Pueblos, El Camino Real de Tierra Adentro, acequia culture), and recreational opportunities. The Report, which was developed from citizen and agency input and endorsed by the Secretary, called for expanded efforts to improve conservation, recreation, and education efforts in the Middle Rio Grande. This is, in part, the same area that would be affected by SunZia and in some important ways the SunZia project is in direct conflict with the vision and goals of the Report.

This is the case in terms of protecting wildlife in the Middle Rio Grande Valley. The Bosque del Apache National Wildlife Refuge is a key migratory bird refuge in the southwest region of the United States. The refuge comprises 57,331 acres of Rio Grande floodplain, irrigated farms and wetlands and includes over 40,000 acres of grasslands and foothills. Tens of thousands of

1755	Comment Response
4	Section 2.3.3.1 of the DEIS describes alternative transmission line routes that were considered and eliminated. The alternative routes located south of the Bosque or north of the Sevilleta National Wildlife Refuge were eliminated because they were not feasible. The southern routes would cross either wilderness study areas or military lands that were excluded for new rights-of-way. The northern routes were excluded because they would cross wilderness study areas or BLM exclusion areas. Construction of underground cables was analyzed in Section 4.16. The BLM determined that mitigation measures to be implemented would be effective for construction and operation of overhead transmission lines at the Rio Grande crossing.

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Sandhill Cranes, Ross and Snow Geese and over 370 other species of birds flock to this Refuge every year for both wintering over and summer nesting and breeding. The Refuge is a tourist destination that attracts over 160,000 visitors a year and fuels a vital tourist industry in the economically vulnerable Middle Rio Grande Valley. The dense populations of birds draw birders, photographers, artists, and visitors of all types including hunters to the Bosque annually and contribute some $20.3 million in revenue to the nearby counties of Socorro, Bernalillo and Sierra. (Source: US Fish & Wildlife (2004) *Banking on Nature: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation*, Washington, D.C.)

4 The BLM-preferred route for SunZia would put a significant wildlife hazard directly in the flight path of large migratory birds, such as cranes and geese. These birds make daily flights along a 50-mile corridor from the Bosque south of Socorro to the specially planted farm fields, conservation lands and feeding grounds of Ladd Gordon Waterfowl Refuge north of Socorro. Their flight altitude and the height of the proposed line are in the same 100-175' range and would result in repeated collisions and potentially high bird mortality. We believe that the bird mortality study completed as part of the DEIS has significant uncertainty associated with it and significantly underestimates the bird mortality that would result from SunZia.

The Middle Rio Grande Conservation Initiative report, by contrast, called for extensive efforts to protect habitat for migratory birds and other wildlife, expand conservation and restoration on public and private lands, and capitalize on eco-tourism and heritage tourism associated with the Middle Rio Grande Valley (e.g. by establishing a Middle Rio Grande Birding Trail). While facilitating the development of renewable energy is certainly a Department of the Interior priority, routing SunZia through one of the most sensitive parts of the Valley for migratory birds also conflicts with the Department of Interior's own mission and goals as reflected in the Middle Rio Grande Conservation Initiative.

Transportation corridors, including, including long sections of the I-25, US 60 and US 385 corridors, offer many sweeping, unspoiled views of the Rio Grande Valley. In addition, the route of the Camino Real de Tierra Adentro National Historic Trail is found throughout the area. Impacts from SunZia on the Camino Real could be significant at the proposed river crossing areas (e.g. in the "Bosquecito" area). Placing a massive transmission line in this viewshed requires careful consideration of impacts to wildlife, open space, cultural resources, and local economies tied that are tied to the wildlife and the quality of the landscape—and it should be avoided.

BLM should not select any routes crossing the Rio Grande near the Bosque del Apache National Wildlife Refuge or in the 50-mile section of the Middle Rio Grande Valley between the Refuge and the Bernardo/Ladd Gordon complex unless SunZia can be located underground (and provided such construction has acceptable environmental impacts). The Rio Grande Chapter recommends the BLM revisit the northern route alternative near Belen, which could connect the SunZia Substation to the east with the existing energy corridor west of I-25 and cross the Rio Grande via a line-dedicated bridge (but also avoiding Sevilleta National Wildlife Refuge). Such a route would utilize existing

1755	Comment Response
	See following page(s)

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4 **transmission easements, place towers in existing commercial areas, and avoid costly wildlife mitigation and damaging economic impacts to the counties. The Rio Grande Chapter also recommends that BLM revisit a proposed route that would cross the river south of Elephant Butte and utilize the Armanderis Ranch, areas on the west side of White Sands Missile Range, and other lands outside of the migratory flyway.**

5 Citizen Wilderness Inventory (CWI) units in New Mexico: BLM has strived to avoid impacts to designated wilderness and wilderness study areas, but many of the potential routes would intersect Citizens' Wilderness Inventory (CWI) units inventoried by the New Mexico Wilderness Alliance (NMWA). SunZia should also not cross CWI units. In some cases all of the routes in the DEIS would cross CWI units, increasing the importance of minimizing and off-setting impacts if they cannot be avoided. These areas have been found by NMWA to have "wilderness characteristics," including naturalness, solitude and the opportunity for primitive recreation. Beyond these core values, these lands also provide important wildlife habitat, cultural and scientific resources, invaluable ecosystem services including clean air and water, important economic benefits, and many other resources and values. The sensitive nature of these lands and their resources and values makes protection critical and transmission development on them inappropriate. The CWI units intersected by the SunZia routes in New Mexico (by SunZia subroute number) are:

- E101: Cibola Canyon, Stallion, Sierra de la Cruz
- E133: Veranito
- A111 and A112: Padillo Gonzales
- E90 and A90: Stallion
- A160: Chupadera Wilderness Addition
- E211: Magdalena Mountains 2
- A161B: Magdalena Mountains 3
- A270: Penasco Canyon
- A430: Sierra de las Uvas
- A361 and A400: Nutt Mountain
- A481: Goodsight Mountains
- A430 and A500: Massacre Peak
- B150a: Lordsburg Playas North

Among the routes presented in the DEIS, the BLM should select the following subroutes as the BLM-preferred route in the FEIS:

- I-25 crossing north of Truth or Consequences: the BLM should select subroute A260 to avoid intersecting the Penasco Canyon CWI unit (subroute A260 are in the BLM-preferred route in the DEIS).
- Subroutes north of the proposed Midpoint Substation: the BLM should select subroutes A400, A440, A530, and A520 to avoid intersecting the Nutt Mountain, Sierra de las Uvas, and Goodsight Mountains CWI units (subroutes A400, A440, A530, and A520 are in the BLM-preferred route in the DEIS). The BLM should also adjust subroute A400 to avoid the Nutt Mountain CWI unit (subroute A400 currently runs along the edge of the Nutt Mountain CWI unit). The BLM should also adjust subroutes A440 and A530 to

1755	Comment Response
5	Text has been modified in Section 3.12.4 of the FEIS as follows: Last sentence of first paragraph on page 3-266 *"Citizen's Wilderness Inventory Units have been reviewed as part of the inventory of Lands with Wilderness Characteristics on BLM lands."* The following CWI units would not be crossed by the preferred route: Padillo Gonzales, Chupadera Wilderness Addition, Penasco Canyon, Sierra de las Uvas, Nutt Mountain, and Goodsight Mountains. The Preferred Route would traverse the Cibola Canyon, Stallion, Sierra de la Cruz, and Lordsburg Playas North CWI units; however, there are existing unpaved roads within these units. The Preferred Route would also cross the Veranito but it would be located along the edge of this CWI unit where there are existing unpaved roads. The Magdalena Mountains (2 and 3), Nutt Mountain, and Massacre Peak CWI units would be crossed by the Preferred Route; however, it would parallel an existing 345kV transmission line and associated access roads within these units. Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to be inventoried to identify lands with wilderness characteristics, which would support a citizen's wilderness inventory proposal. Within the SunZia study corridors, the Nutt Mountain LWC unit in New Mexico was identified based on the manual (MS-6310), and would be crossed by one of the SunZia transmission line alternative routes (not the Preferred Route) Also as stated in the FEIS as follows: "According to the current inventory conducted in *October 2012, the Preferred Route would cross an LWC unit that was identified, located adjacent to the Stallion WSA*." The BLM Preferred Alternative has been modified to avoid the Lordsburg Playa using links B160a and B160b as modified Subroute 3A2. The

1755

avoid the Massacre Peak CWI unit (subroutes A440 and A530 run along the edge of the Massacre Peak CWI unit).

- Lordsburg Playa area: the BLM should select subroutes B160a and B160b to avoid intersecting the Lordsburg Playas North CWI unit (subroutes B160a and B160b are in the BLM-preferred route in the DEIS).

Mitigation

While, of course, a final alternative has not yet been selected, the Rio Grande Chapter believes the DEIS lacks sufficient information about mitigation approaches, and lacks explicit commitment to a range of measures that could off-set impacts from SunZia. We believe these measures should include (first and foremost) avoiding impacts if possible (see Route selection recommendations above), use of best management practices (BMPs) in construction and operations, and compensatory mitigation off-site.

Specifically, if an action alternative is forthcoming, the Rio Grande Chapter requests:

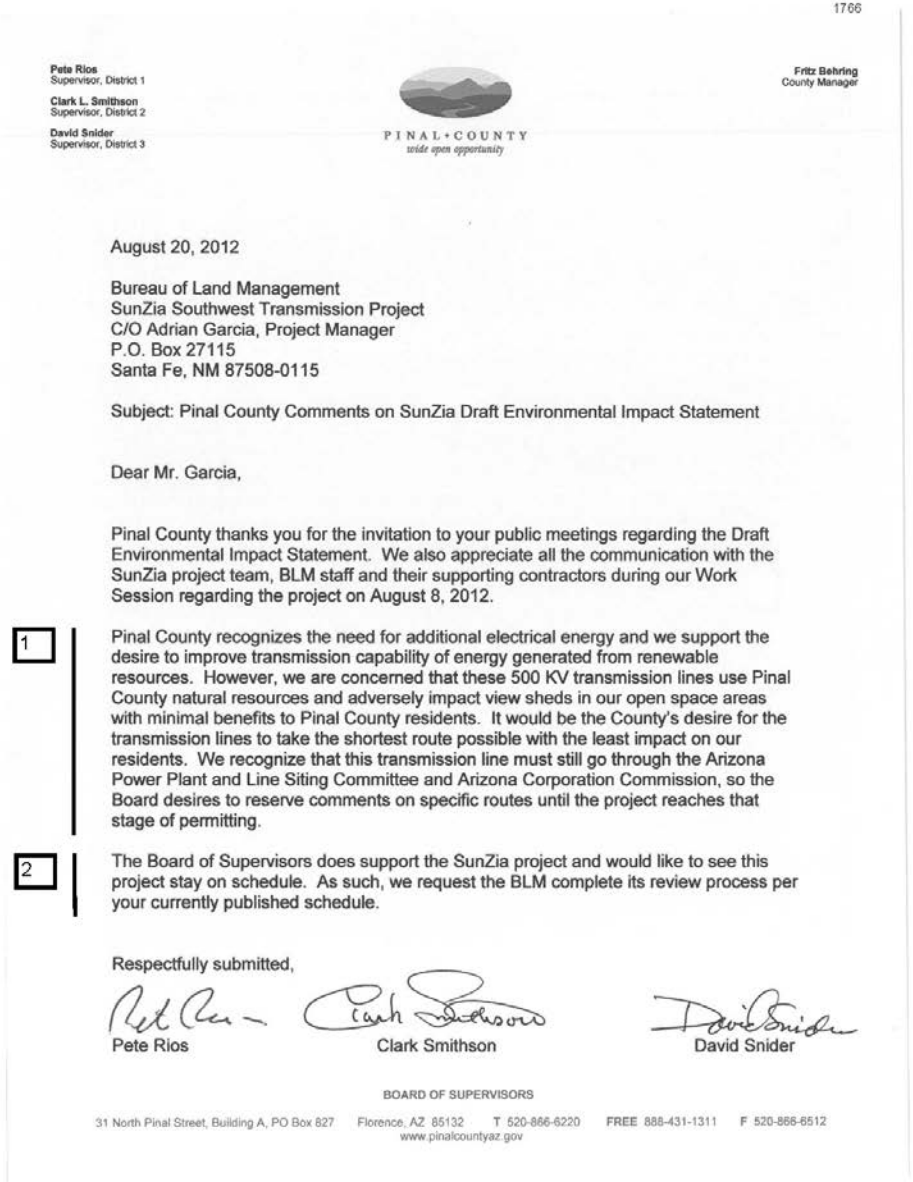
- A detailed Construction Plan and Maintenance & Operations Plan.
- Use of BMPs for mitigating impacts of transmission line planning and development (e.g. aerial-assisted construction where possible, avian avoidance and protection techniques for power lines, limits on roads and access).
- Off-site mitigation in the form of increased administrative protection for BLM and Forest Service lands, purchase in fee-simple and/or conservation easement of wildlife habitat and open space in important and sensitive locations (such as the Rio Grande Valley, lands near WSAs and/or CWIs, and state trust lands in Arizona), and projects with BLM and the National Park Service to protect and interpret sections of the Camino Real in the Middle Rio Grande Valley.
- Establishment of a dedicated source derived from SunZia revenues that can continue to fund investments in land conservation, wildlife protection, cultural heritage protection, and renewable energy education over the lifetime of the project.

Conclusion

The Rio Grande Chapter sees significant potential benefits from SunZia for the continued development of renewable energy in New Mexico. The DEIS, however, lacks complete information regarding the relative importance of SunZia for renewable energy development since it is not clear how much renewable energy will be carried, how the project relates to future electricity demand and other transmission projects, and what the economic impact of building the line will be on other significant economic sectors of the affected counties. In light of this uncertainty, the Rio Grande Chapter believes that it is especially important to require SunZia to carry a high percentage of renewably-generated electricity and to create conditions for a net reduction in greenhouse gas emissions in terms of its own construction and of the power generation projects that it serves.

Concerns about the environmental impacts SunZia would cause also mean that the Rio Grande Chapter cannot at this time support the BLM-proposed alternative in the DEIS, which

1755	Comment Response
6	Comment noted
7	Please see responses to comment nos. 1-6.



1766

Pete Rios
Supervisor, District 1

Clark L. Smithson
Supervisor, District 2

David Snider
Supervisor, District 3

PINAL • COUNTY
wide open opportunity

Fritz Behring
County Manager

August 20, 2012

Bureau of Land Management
SunZia Southwest Transmission Project
C/O Adrian Garcia, Project Manager
P.O. Box 27115
Santa Fe, NM 87508-0115

Subject: Pinal County Comments on SunZia Draft Environmental Impact Statement

Dear Mr. Garcia,

Pinal County thanks you for the invitation to your public meetings regarding the Draft Environmental Impact Statement. We also appreciate all the communication with the SunZia project team, BLM staff and their supporting contractors during our Work Session regarding the project on August 8, 2012.

1 Pinal County recognizes the need for additional electrical energy and we support the desire to improve transmission capability of energy generated from renewable resources. However, we are concerned that these 500 KV transmission lines use Pinal County natural resources and adversely impact view sheds in our open space areas with minimal benefits to Pinal County residents. It would be the County's desire for the transmission lines to take the shortest route possible with the least impact on our residents. We recognize that this transmission line must still go through the Arizona Power Plant and Line Siting Committee and Arizona Corporation Commission, so the Board desires to reserve comments on specific routes until the project reaches that stage of permitting.

2 The Board of Supervisors does support the SunZia project and would like to see this project stay on schedule. As such, we request the BLM complete its review process per your currently published schedule.

Respectfully submitted,

Pete Rios Clark Smithson David Snider

BOARD OF SUPERVISORS

31 North Pinal Street, Building A, PO Box 827 Florence, AZ 85132 T 520-866-6220 FREE 888-431-1311 F 520-866-6512
www.pinalcountyaz.gov

1766	Comment Response
1	Comment noted. Please also note that the degree of impact is not necessarily proportionate to the length of the transmission line route, as there are diverse conditions throughout this portion of Pinal County, as reported in the comparison of resource impacts in the DEIS (Table 2-15). Although the project would traverse open spaces in Pinal County and in the viewsheds of residential land uses, where possible, the Project would parallel existing transmission lines or other linear features, which have already modified the setting, and thus visual impacts to open space and residences would be reduced.
2	Comment noted

1773

COUNTY ADMINISTRATOR'S OFFICE

PIMA COUNTY GOVERNMENTAL CENTER
130 W. CONGRESS, TUCSON, AZ 85701-1317
(520) 740-8661 FAX (520) 740-8171

C.H. HUCKELBERRY
County Administrator

August 22, 2012

Mr. Adrian Garcia
Project Manager
Bureau of Land Management
New Mexico State Office
SunZia Southwest Transmission Project
P.O. Box 27115
Santa Fe, New Mexico 87502-0115

Re: **Comments on Draft Environmental Impact Statement – SunZia Southwest Transmission Project**

Dear Mr. Garcia:

[1] Pima County's opposition to locating the SunZia Southwest Transmission Project (SunZia) anywhere within Pima County has been consistent since we first reviewed this project's scope and proposed alternatives. While the County applauds efforts that explore and develop renewable energy resources, it is important to also include a comprehensive assessment of where such resources should be appropriately located and where they can be developed with the least social, economic and environmental impacts. Given the nature and scale of this project, an inclusive statewide or regional assessment of energy resources would have been appropriate to identify where these resources could be located that do not threaten water resources, meet applicable environmental laws and policies, protect capital investments made for local conservation and do not impact wildlife and scenic areas supporting eco-based tourism. The County's position has not changed, especially in light of Subroute 4C2c, which is part of the Bureau of Land Management's (BLM) Preferred Alternative as presented in the May 2012 Draft Environmental Impact Statement (DEIS).

The Preferred Alternative is inconsistent with local conservation policies as expressed in the County's adoption of the Sonoran Desert Conservation Plan (SDCP). Subroute 4C2c crosses the northeastern corner of Pima County and bisects lands that the County secured - with significant investment of voter-approved public funds for conservation - to maintain as undeveloped open space and preserve the community's ranching heritage. These lands

1773	Comment Response
1	Comment noted. Although other generation facilities could be constructed in Arizona, those projects would not fulfill the purpose and need for the Project, which is to transmit electricity from locations primarily in New Mexico and portions of southeastern Arizona to western power markets.

1773

Mr. Adrian Garcia
Re: **Comments on Draft Environmental Impact Statement – SunZia Southwest Transmission Project**
August 22, 2012
Page 2

are used to fulfill the biological and cultural conservation objectives of the County's SDCP and will also be used to comply with mitigation requirements of our forthcoming Section10 Incidental Take Permit from the U.S. Fish and Wildlife Service.

More recently, upon conclusion of an on-going negotiation for acquisition of additional land in the San Pedro Valley, the County will have created a 64,000-acre unit on par with the much-acclaimed Muleshoe Ranch Cooperative Management Area. Since the DEIS states that many of the substantive decisions about what actions will be taken to avoid and minimize impacts will be deferred to the Plan of Development (POD) as well as execution of certain Standard and Selective Mitigation Measures, all of which will occur post-completion of the NEPA process, we have little certainty of what practices will be implemented on lands within our management unit.

Despite being the active land managing entity with direct stewardship responsibilities, Pima County will not, because of a lack of fee ownership, have a mandated voice in determining what and where avoidance, minimization, and especially reclamation actions are to be applied. Consequently, we have concerns that this project, should it continue to be routed through Pima County, will compromise our ability to maintain quality management of these lands in order to accomplish conservation objectives. Given our previous experiences with the legacy of other linear projects such as the Kinder-Morgan Pipeline and the ineffectiveness of those mitigation treatments, which are similar to those proposed for the SunZia project, Pima County, the local jurisdiction, will be burdened with managing the undesirable consequences of additional disturbances such as introduction and spread of invasive species, restricting the use of fire to improve ecological condition, and fragmenting habitat and vegetation communities.

Project Scope and Need

2 The project's purpose and need continues to be inadequately described in the DEIS, despite our earlier scoping comments. SunZia was advertised as a renewable energy project by BLM during the scoping period, but in fact it is a merchant transmission line which is not restricted to renewable energy generated power. The principal project proponent is a company with a significant investment in development of new fossil-fuel power generation in Bowie, Arizona. The DEIS has not provided adequate disclosure regarding the relationship of this transmission line to the motivations of the proponent in relation to their Bowie gas-fired power plant and the proximity of existing natural gas supplies and demands in the region.

While the DEIS estimates that between 81-94 percent of the energy SunZia moves would be renewable, it appears more likely that about a third of the line's capacity could be taken up from the 1000 MW Bowie gas-fired power plant alone, especially in the early years, when there would be little wind or solar power available from New Mexico. Given the glut of natural gas in our region, and the declining federal subsidies for renewables, it is entirely

1773	Comment Response
2	The SunZia project includes proposed 500 kV transmission lines and substations, but power generation projects are not part of the proposal, and the analysis of direct environmental effects of power generation projects is not part of the EIS studies. The cumulative effects of potential power generation projects, including the Bowie Power Station, are evaluated in the DEIS (Section 4.17) based on estimates of future energy development scenarios.

1773

Mr. Adrian Garcia
Re: **Comments on Draft Environmental Impact Statement – SunZia Southwest Transmission Project**
August 22, 2012
Page 3

likely that wind and solar investments in New Mexico will not be built for decades. Furthermore, we understand that SunZia does not intersect with and thus would not be able to carry energy from BLM's Afton Solar Energy Zone and associated substation near Las Cruces, New Mexico. However, SunZia does connect with the natural gas-fired power plant and Willow substation, near Bowie, Arizona, and other gas-fired power plants and substations along the Interstate 10 corridor. Thus the purpose and need as stated by BLM in the scoping materials for this project, as well as information provided at public meetings and in the energy development forecast in the DEIS, gives a false impression of the purpose and need for the project as well as the benefits. 2

The Southwest Area Transmission Study was referred to as an impetus for this project. However, the document does not identify the need to tap wind resources from New Mexico over and through Arizona into California. It states that California needs more renewable energy and power in general and identifies western Arizona as a potential solar energy source. Since that time, we are aware that California officials have further expressed their preferences for in-state production of solar energy. In addition, several western Arizona solar projects have been completed far in advance of any western New Mexico wind projects.

Along these lines, BLM completed a regional assessment of potential renewable energy resource locations and set aside significant acreage in western Arizona for solar energy development. This should be considered as part of a needs assessment for the overall SunZia project. Energy resources can be generated in Arizona closer to the SunZia delivery destination, thus the need for developing transmission lines from New Mexico across Arizona should be re-examined in light of Arizona BLM's study. 1

Locally, Pima County has been cooperating with Tucson Electric Power (TEP) on specific Tucson area projects that contribute to TEP's renewable energy targets and are on a much faster track toward completion than what is being proposed by SunZia. It makes programmatic sense from a financial and environmental impact standpoint to locate and develop an energy source closer to the target area, as opposed to locating and constructing 500 miles of transmission lines across two vast landscapes to reach an intended target area.

The County does not feel the SunZia project will significantly advance local efforts in renewable energy or that enough evidence and information has been provided to justify need for the overall project.

Alternatives Analysis

The alternatives analysis contained in the DEIS does not evaluate a sufficient range of alternatives, given the stated purpose and need. All of the proposed alternative routes go through Bowie, Arizona, despite the fact that delivering energy from the proposed Bowie 3

1773	Comment Response
3	Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines. The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation.

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3 (gas) power plant is not expressly stated as a primary purpose and need of the proposed project. If SunZia is needed to deliver wind energy from central New Mexico to markets in Arizona and further west, it is unclear why all of the routes in the DEIS must go south to connect with Bowie – especially given that some of the routes head north after passing through Bowie. Routes connecting central New Mexico to central Arizona should have been evaluated in the DEIS, for instance, along the US 60 or US 70. We also question whether a modification of the Southline Project could fulfill much of the project purpose and need.

BLM Preferred Alternative – San Pedro Valley Route

The San Pedro Valley is located in the far northeastern corner of Pima County, east of the Catalina Mountains, and encompasses the San Pedro River corridor. The San Pedro River is the last free-flowing river in the State of Arizona, and was identified as one of the ten most endangered rivers in the United States by American Rivers in 1999. Due to the river and its associated wetlands, it contains the highest quality riparian gallery forest in all of southern Arizona and remains a critical area for seasonal migratory birds between North, Central and South America.

The County's ownership in the area totals approximately 11,120 acres in fee and 43,100 acres in held State grazing leases. Currently, the County is in negotiations to acquire an additional 620 acres in fee and the associated 8,500-acre State grazing lease, essentially creating a 64,000-acre County management unit. Using 2004 voter-approved bond monies, the County acquired Six Bar Ranch and the A-7 Ranch in the San Pedro River Valley. Acquisition of the A-7 Ranch included 6,800 acres of fee lands, the 34,000-acre State grazing lease, and an 80-acre Bureau of Land Management grazing permit. The County manages the ongoing ranching operations, while conserving and protecting biological and ecological values of the lands. The BLM Preferred Alternative Subroute 4C2c passes right through the County-held State grazing lease for A-7 Ranch and cuts through a number of important conservation areas, wildlife travel corridors and cultural resources sites on the property that are large enough that minor adjustments to the line footprint will not adequately mitigate potential impacts. This alignment would cut across nearly all of the major A-7 Ranch roads, pastures and key use zones, which can hamper our operation and conservation ranching approach. Placement of a new transmission line inevitably results in increased public access across a landscape. No matter the steps taken, the lands become much more accessible and remain open because of the need to manage and repair the transmission lines and disturbances during construction that are never fully mitigated. A prime example has been the Kinder-Morgan pipeline project's ongoing impacts to the County's Cienega Creek Natural Preserve and Bar V Ranch management and protection. Despite mitigation efforts by the company, impacts continue for the County to address with no long-term support or ability to reconfigure the impacts due to the constraints now placed by the location of the utility infrastructure corridor.

4

1773	Comment Response
4	Comment noted. The DEIS analysis addresses impacts to conservation areas, wildlife travel corridors, and cultural resources, and identifies mitigation measures that would be effective to reduce or avoid the Project's impacts to those areas.

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The County has made significant investment and commitment to long-term conservation in this area similar to the Muleshoe Ecological Management Area in Cochise County. It has been the County's stated intent to manage the property as a unit. The County should be afforded consideration and protection similar to the Muleshoe area.

Area Archaeological Resources

The current BLM Preferred Alternative Route includes Subroute 4C2c, which crosses the northeast corner of Pima County as it parallels the west side of the San Pedro River Valley. The intact cultural landscape and high archaeological sensitivity of the San Pedro Valley are well documented and reflects important prehistoric occupations as well as historic ranching. There are dozens of recorded sites in the valley near this corridor, with excellent potential for additional, as yet undiscovered resources. Well-known sites in this area include the prehistoric villages of Reeve Ruin, Redington Ruin, and Bayless Ranch Ruin, as well as an historic cemetery near the river. The interactive map shows the Preferred Alternative running above the valley bottom to avoid crossing the river in this area, but the construction will cause disturbances that could result in direct and indirect impacts on sites and will certainly impact natural resources in the area. The County agrees with Tribal opposition to the BLM Preferred Alternative Route because of the high potential for impacts on ancestral Native American sites and, especially, the potential to disturb human burial remains in the San Pedro Valley. 5

Vegetation Management Along Transmission Lines

A present issue we face with electric utilities is vegetation loss due to clearing under federal rules for reliability standards. Attached is a brief report with information on vegetation management practices along transmission lines in Pima County and the dramatic example in one of the County's most valued riparian corridors along Cienega Creek. The photographs show the complete clearing of three acres of cottonwood gallery forest and mesquite bosque on land owned by Tucson Electric Power, which crosses through the County's Cienega Creek Natural Preserve. This clearing of streamside forests was done under the 2006 federal rule mandating power line maintenance for power reliability. What is of concern is the implementation of this rule. After this occurrence, the U.S. Fish and Wildlife Service hosted a meeting with Tucson Electric Power and advised that if this type of clearing would be a recurring practice, they would need to consult with the Service on the potential for Incidental Take and possibly consider developing a Habitat Conservation Plan. Also attached is a copy of a letter from Arizona Corporation Commission Chair, Kristin K. Mayes, to Don Brandt, President and CEO of Arizona Public Service, expressing concerns over their vegetation management practices and a similar clearing in the Phoenix area. The practice of clear-cutting vegetation below electric transmission lines significantly and dramatically increases the environmental impact of locating these facilities. Obviously, this practice is of significant concern to the County as it relates to the SunZia project 6

1773	Comment Response
5	Comment noted. Potential impacts would be addressed through Class III survey, and preparation and implementation of HPTP.
6	The BLM Preferred Alternative would not cross Cienega Creek. The BLM Preferred Alternative would cross the San Pedro River at location where the base of the tower structures can be constructed to allow a clear span above a large portion of the mesquite bosque, and therefore avoid clear cutting in the riparian zone.

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6 overall, and especially as it relates to the BLM Preferred Alternative route, which will pass through significant riparian resources subject to similar widespread destruction.

Wildlife Linkages

7 The DEIS needs to incorporate consideration of the soon-to-be-released Santa Catalina/Rincon – Galiuro Linkage (map attached). This report is a component of a larger undertaking sponsored by the Pima County Regional Transportation Authority to identify regionally important wildlife linkages. The analysis of impacts for this linkage as well as the others currently included in the DEIS needs to go beyond the cursory treatment of the current analyses and earnestly utilize the data in these reports to examine the likelihood that the construction of the SunZia Transmission Line will modify species' use of the linkage and the ramifications that may have for the effectiveness of the linkage. This is especially the case in the assessment of additive impacts where distances between blocks of useable habitat core and patches will be increased. Additionally, the analyses need to address the potential for the project to effect change in those habitat parameters crucial to linkage species because of the ensuing requirements to adjust vegetation management practices such as the use of fire in order to meet project maintenance and operation standards.

Fire Management

8 Fire is recognized as an important vegetative management tool especially in the desert grassland ecosystem. Fire as a tool has the capability to maintain and enhance vulnerable grassland systems and can be used to restore previously damaged systems. Current discussions and practices of utilities regarding the full control or absence of fire, on or near utility corridors, has caused the use of this important tool to be impacted. The proposed project cuts a line across significant lands that are part of an active fire management zone. Restricting fire because of the presence of a new utility corridor will impact ongoing and future ecosystem restoration projects on private and government jurisdictional lands. This location of an obstructing presence across lands where controlled fire is currently allowed, as a beneficial and a cost productive management tool, is a negative impact that needs to be identified, quantified and mitigated in detail as it relates to any of the proposed routes within the SunZia project.

Summary

9 If BLM, in spite of our objections, approves a final route for SunZia that includes segments in Pima County and especially Subroute 4C2c, aside from the above recommendations the following stipulations need to be made mandatory:

- Pima County will have equitable status with land owners/land management agencies in the development and execution of the Plan of Development.

1773	Comment Response
7	Considerable effort was spent in literature searches for the effects of transmission lines and similar actions on aridland wildlife through habitat fragmentation. Temporary effects would occur during construction, but no information is available that clearly shows that the operation of a transmission line has a significant effect on species present in the Project area. The DEIS (Section 4.6.3.1) acknowledges that recreational vehicle use of access roads may cause an ongoing source of disturbance to wildlife. However, this is not anticipated to alter the viability of the linkage described in the comment. Gating, fencing, and road closures would be implemented as necessary or as required by the land owner, as provided for in standard and selective mitigation measures. The potential effects of the Project on fire management are discussed in Section 4.7.
8	The potential effects of the Project on fire management are discussed in Section 4.7.
9	Comment noted

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9

- When the alignment crosses lands where Pima County is not the land owner, but is the active, on-the-ground land manager, Pima County requirements for and recommendations on suitable locations for the application of Standard and Selective Mitigation Measures will be accommodated.

- The project proponent and Pima County will seek mutual agreement on additional accommodations necessary to preserve the County's ability to rely on lands that the County manages for purposes of accomplishing our SDCP objective, and providing mitigation for our Section10 Incidental Take Permit from the U.S. Fish and Wildlife Service where those lands are crossed by the SunZia Transmission Line. Any agreements reached must be codified and enforceable.

Thank you for the opportunity to comment on this project, and we look forward to continued participation in this process.

Sincerely,

C.H. Huckelberry
County Administrator

CHH/dr

Attachments

c: The Honorable Chairman and Members, Pima County Board of Supervisors
Ray Suazo, Arizona State Director, Bureau of Land Management
Brian Bellew, Field Manager, Bureau of Land Management
Linda Mayro, Director, Office of Conservation and Sustainability
Sherry Ruther, Environmental Planning Manager, Office of Conservation and Sustainability
Kerry Baldwin, Parks Superintendent, Natural Resources, Parks and Recreation
Julia Fonseca, Environmental Planning Manager, Office of Conservation and Sustainability
Diana Durazo, Special Staff Assistant to the County Administrator

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	See following page(s)

1801

From: Elna Otter
To: BLM_NM_SunZia_Project
Subject: SunZia Comment: Please choose the No Action Alternative
Date: Wednesday, August 22, 2012 8:47:04 PM

Adrian Garcia,
BLM SunZia Project Manager,
P.O. Box 27115,
Santa Fe, NM, 87501

Dear Mr. Garcia:

We are a group of Arizonans who write from Al Gore's Climate Reality Training in California. We are truly committed to ending climate change and increasing the use of renewable energy. We understand that today is the last day that citizens can comment on the proposed SunZia transmission line and we would like to strongly plea for the no action option on the project..

SunZia was originally proposed in conjunction with the Bowie Power Plant several years ago. Both projects were proposed by the Southwest Power Group. We are gratified that they failed to obtain a license to produce energy with what they called "clean coal." Unfortunately, they still have a license to produce energy with natural gas at the Bowie site, and there is every expectation that the Bowie plant will be constructed to be one of the "anchors" for SunZia. 1

The net of all this, is that despite the US Government's efforts to increase renewable energy sources, those efforts are being subverted by misleading statements by SunZia. We want to see more renewables, but believe that a major consequence of their obtaining anything other than a no-actionalternative will be the construction of yet another fossil fuel plant.

2 Please choose the no-action option for the DEIS.

Thank you.

Scott Anderson
1791 N. Geronimo Rd.
Apache Junction, AZ 85119

Melissa Antone
2622 E. Leonora St.
Mesa, AZ 85213

Kate Huffman
10239 E. Shangri La
Scottsdale, AZ 85260

Elna Otter
5819 N. Cascabel Rd.
Benson, AZ 85602

Vince Pawlowski
255 W. University Blvd,
Tucson, AZ

Jill Pyatt
220 Grove Avenue
Prescott, AZ 86301

1801	Comment Response
1	As stated in the DEIS (p. 1-7), "Federal Energy Regulatory Commission (FERC, or Commission) Order 888 provides that owners of transmission facilities make such services available on the open market. Transmission facility services are to be provided on a nondiscriminatory, comparable basis to others seeking similar services, including ancillary services..." and reiterated on p 4-274 of the DEIS, "As previously discussed, FERC Order 888 compels transmission owners to provide open access to its facilities without discrimination, including discrimination as to type of generation requesting interconnection and transmission service." Although FERC rules do not allow for discriminatory preference among generation subscribers to a transmission line, "it is the intent of the Applicant to provide infrastructure to increase transmission capacity in areas of potential renewable energy generation" (see DEIS, p.1-8). Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity. Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines. The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation.
2	Comment noted

1801

Ken G. Sweat
P.O. Box 37100
Phoenix, AZ 85069

Steve Thompson
8432 E. 57th
Scottsdale, AZ 85250

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	See following page(s)

1830

Coalition for
Sonoran Desert Protection
300 E. University Blvd., Suite 120
Tucson, Arizona 85705
p (520) 388-9925 • f (520) 791-7709
www.sonorandesert.org

August 22, 2012

Adrian Garcia, Project Manager
Bureau of Land Management
SunZia Southwest Transmission Line Project
P.O Box 27115
Santa Fe, NM 87502-0115
Via electronic mail to NMSunZiaProject@blm.gov

Re: Comments on Proposed SunZia Transmission Project DEIS

Dear Mr. Garcia:

The Coalition for Sonoran Desert Protection appreciates the opportunity to provide comments on the Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Line Project (SunZia).

I submit the enclosed comments on behalf of the Coalition for Sonoran Desert Protection, founded in 1998 and comprised of 40 environmental and community groups working in Pima County, Arizona. Our mission is to achieve the long-term conservation of biological diversity and ecological function of the Sonoran Desert through comprehensive land-use planning, with primary emphasis on Pima County's Sonoran Desert Conservation Plan. We achieve this mission by primarily advocating for: 1) the protection and conservation of Pima County's most biologically rich areas, 2) directing development to appropriate land, and 3) requiring appropriate mitigation for impacts to habitat and wildlife species.

Recommendation – adopt the NO ACTION Alternative

1

We recommend that the BLM adopt the No Action Alternative which the National Environmental Policy Act of 1969 (NEPA) requires you to consider as a viable alternative. We believe that the balance of theoretical benefits of this proposal does not outweigh the considerable long term, if not permanent, negative environmental impacts of developing and operating the proposed SunZia Transmission Line. The environmental consequences of **any** of the other alternatives would result in such significant degradation and potentially irreparable harm to our natural environment that it would be impossible to mitigate for the adverse impacts caused by this proposal.

We fully support the comprehensive and detailed comments submitted by our member groups regarding the DEIS – those comments submitted by Defenders of Wildlife, Sky Island Alliance, Tucson Audubon Society, Sierra Club – Grand Canyon Chapter and others.

1830	Comment Response
1	Comment noted

1830

We would like to take the time to highlight additional items of concern. These comments focus on our core mission of protecting Pima County's rich biological resources through comprehensive land-use planning, and specifically an analysis of possible conflicts between the proposed action and the Pima County Comprehensive Land Use Plan, a topic lacking detailed analysis in the DEIS.

Sonoran Desert Conservation Plan

Pima County's Sonoran Desert Conservation Plan (SDCP) is a ground-breaking effort to conserve the most ecologically valuable lands and resources across the region, while guiding growth into more appropriate areas. The SDCP addresses several elements of resource conservation, including cultural preservation, open space conservation, protection of mountain parks and natural reserves, and ranch conservation, and ecological conservation.

The biological goal of the SDCP is "to ensure the long-term survival of the full spectrum of plants and animals that are indigenous to Pima County through maintaining or improving the ecosystem structures and functions necessary for their survival." While the DEIS does acknowledge the SDCP, the only major component of the SDCP analytically evaluated in the DEIS are impacts to "priority vulnerable species."

On page 3-181, the DEIS states:

"Unincorporated areas of Pima County are managed under the SDCP, which includes a science-based conservation plan, a comprehensive land use plan, and a multiple species conservation plan. The SDCP gives "high priority to preserving and protecting (Pima County's) most important natural resources." Goals and objectives for the biological element of the SDCP include the following:

- *"Promote long-term viability for species, environments, and biotic communities that have special significance to people in this region, because of their aesthetic or cultural values, regional uniqueness, or economic significance" (Pima County 2010)"*

While the DEIS acknowledges the existence of the SDCP, it fails to evaluate SunZia's impacts to important elements of this regional conservation planning effort. One key component of the SDCP that deserves further evaluation in the Final EIS is the impact on the Maeveen Marie Behan Conservation Lands System (CLS).

2

Conservation Lands System

We contend that without further evaluation of the CLS and other components of the SDCP such as Pima County's proposed Multi-Species Conservation Plan, the DEIS does not satisfy the federal mandate that a DEIS "shall include discussions of possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned" (40 C.F.R. § 1502.16(c)). Furthermore, the DEIS does not align with 40 C.F.R. § 1506.2(d) which states, "To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local

1830	Comment Response
2	The Pima County Comprehensive Plan Update Regional Plan Policies, including the CLS were reviewed. The SunZia Project does not conflict with the CLS as stated in the comment because, as stated on page 36 of the Regional Plan Policies, "These policies apply to new rezoning and specific plan requests, time extension requests for rezoning, requests for modifications or waivers of rezoning or specific plan conditions, including substantial changes, requests for Comprehensive Plan amendments, Type II and Type III conditional use permit requests, and requests for waivers of the subdivision plat requirement of a zoning plan." The SunZia Project will require none of the stated actions, and therefore is not in conflict with the stated goals or requirements of the CLS.

plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law."

The CLS was constructed with participation and oversight by the SDCP Science Technical Advisory Team and according to the most current tenets of conservation biology and biological reserve design. The CLS emphasizes retaining areas that contain large populations of priority vulnerable species; providing for the adjacency and proximity of habitat blocks; preserving the contiguity of habitat at the landscape level; and retaining the connectivity of reserves with functional corridors. Through the application of these tenets, the CLS retains the diverse representation of physical and environmental conditions, preserves an intact functional ecosystem, minimizes the expansion of exotic or invasive species, maximizes the extent of roadless areas, and minimizes fragmentation. 2

The CLS consists of a map identifying the categories of environmentally-sensitive lands developed by the Science Technical Advisory Team, as well as an associated set of development guidelines and open space set-asides that have been integrated into the County's planning and zoning regulations and are required for development projects that are subject to a rezoning or other discretionary action. The CLS is part of the Environmental Element of Pima County's Comprehensive Land Use Plan's Regional Plan Policies.

Table 1. Acres of Pima County's Conservation Lands System that would be impacted by typical 400-foot right-of-way associated with SunZia routes.

CLS Categories	SunZia Routes Through Pima County		
	Preferred	4C2	4C2 Local Alternative
Important Riparian	24 acres	670 acres	976 acres
Biological Core Management	638 acres	970 acres	462 acres
Multiple Use Management	124 acres	592 acres	173 acres
Special Species Management	*See analysis below*		

Important Riparian Areas constitute the most biologically sensitive of CLS lands. They are "critical elements of the Sonoran Desert where biological diversity is at its highest... [They] are valued for their higher water availability, vegetation density, and biological productivity. They are also the backbone to preserving landscape connectivity."[1] Pima County guidelines recommend a landscape conservation objective of 95% undisturbed natural open space for Important Riparian Areas. 3

[1] See Pima County's Comprehensive Land Use Plan and proposed Multi-Species Habitat Conservation Plan permit documents at: http://www.pimaxpress.com/Documents/planning/ComprehensivePlan/PDF/Policies_Legend/Regional%20Plan%20Policies%20%28pp.%2019-65%29.pdf

1830	Comment Response
3	Please see comment No. 2 response above, the SunZia Project is not subject to the CLS, and therefore is not in conflict with the stated goals or requirements established.

Biological Core Management Areas are "those areas that have high biological values. They support large populations of priority vulnerable species, connect large blocks of contiguous habitat and biological reserves, and support high value potential for five or more priority vulnerable wildlife species." Pima County guidelines recommend a landscape conservation objective of 80% undisturbed natural open space for Biological Core Management Areas.

Multiple Use Management Areas are "those areas where biological value are significant…[and] support populations of vulnerable species, connect large blocks of contiguous habitat and biological reserves, and support high value potential habitat for three or more priority vulnerable species." Pima County guidelines recommend a landscape conservation objective of 66-2/3% undisturbed natural open space for Multiple Use Management Areas.

Special Species Management Areas are "areas defined as crucial for the conservation of specific native floral and faunal species of special concern to Pima County. Currently, three species are designated as Special Species: cactus ferruginous pygmy-owl, Mexican spotted owl, and southwest willow flycatcher." This designation is an overlay on top of the other CLS land designations. Pima County guidelines recommend "at least 80 percent of the total acreage of lands within this designation shall be conserved as undisturbed natural open space and will provide for the conservation, restoration, or enhancement of habitat for the affected Special Species. As such, land use changes will result in 4:1 land conservation (i.e., four acres conserved for every one acre developed) and may occur through a combination of on- and off-site conservation inside the Special Species Management Area. The 4:1 mitigation ratio will be calculated according to the extent of impacts to the total surface area of that portion of any parcel designated as Special Species Management Area." 3

Table 2. Acres of Pima County's Special Species Management Areas that would be impacted by typical 400-foot right-of-way associated with SunZia routes.

Overlap with CLS Categories	SunZia Route 4C2
Important Riparian	284 acres
Biological Core Management	88 acres
Multiple Use Management	473 acres
Areas outside CLS	3 acres

Finally, Critical Landscape Connections are another important component of the CLS. They are "broadly defined areas that provide connectivity for movement of native biological resources but which also contain potential or existing barriers that tend to isolate major conservation areas." Two of the Critical Landscape Connections are "across the I-10/Santa Cruz River corridors in the

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northwest" and "across the I-10 corridor along Cienega Creek in the east," two areas crossed by the 4C2 route.

3 Unfortunately, as stated above, the DEIS does not quantify nor even qualify impacts to the CLS, a crucial component of the larger SDCP. The proposed SunZia Southwest Transmission Project poses significant threats to the CLS.

More detailed conservation guidelines and the CLS map can be found in Pima County's Comprehensive Land Use Plan and proposed Multi-Species Habitat Conservation Plan permit documents. Before a Final EIS and Record of Decision is issued, the BLM needs to more thoroughly analyze possibly conflicts between the proposed action and this local land use plan, as required in 40 C.F.R. § 1502.16(c) and 40 C.F.R. § 1506.2(d).

Biological Resource Conservation Areas

4 Beginning on DEIS page 4-81, several biological resource conservation areas are identified. It appears however that the list is not complete. The most significant source of funds for open space in Pima County came from voter approval in 2004 of $174 million in bond funds to acquire conservation lands identified as Habitat Protection Priorities. Several of the properties purchased with these bonds funds are not analyzed in the DEIS.

Cienega Valley – Empire Ranch Reserve

5 The DEIS does identify Cienega Creek Natural Preserve as a conservation area in this county reserve area. The DEIS fails, however, to identify Bar V Ranch, which would be crossed by Subroute 4C2. Bar V Ranch was conserved not only through over $8 million dollars in conservation investment from Pima County in the purchase of fee simple lands and state grazing leases, but also through $500,000 in scenic easement funding from the State Transportation Board in 2004 in order to preserve viewsheds. Bar V Ranch is a critical component of the county's preserve system, supporting habitat for at least 34 of the 55 Priority Vulnerable Species identified in the Sonoran Desert Conservation Plan.

Subroute 4C2 Local Alternative would directly cross the Poteet property. This 83-acre property was purchased in 2005 and supports important riparian habitat, including habitat for at least seven Priority Vulnerable Species.

Another property in the reserve area that would be affected by the 400-foot right-of-way associated with Subroute 4C2 is the Walden property. This property supports habitat for the Mexican long-tongued bat, Mexican garter snake, and Swainson's hawk, among others.

San Pedro Valley Reserve

6 The DEIS analyses impacts to the county's A7 Ranch beginning on pages 4-84 and 3-106.

The DEIS fails to consider impacts to Pima County Six Bar Ranch, which the BLM Preferred Route would cross. This 12,000 acre ranch contains a major tributary to the San Pedro River –

1830	Comment Response
4	A discussion of conservation easements in the project study corridor has been added to the FEIS, Section 4.10.5 -
5	Additional discussion on conservation efforts has been added to the FEIS, including reference to the properties discussed in the comment (Section 4.6.4.6).
6	Please see response to comment 5.

1830

6 Edgar Canyon. Besides supporting habitat for a variety of wildlife, the ranch is important in providing an open space corridor between the Santa Catalina and Galiuro Mountains. Much more information about this property, and all other county preserved properties can be found in the *Protecting Our Land, Water, and Heritage: Pima County's Voter-Supported Conservation Efforts* report published February 2011.

Recommendations:
We encourage the BLM to select the "no action alternative". However, if BLM selects an action alternative, we encourage the BLM and SunZia to consider the following recommendations. The Final EIS must adequately analyze the direct, indirect, and cumulative impacts of SunZia to Pima County's Sonoran Desert Conservation Plan, Maeveen Marie Behan Conservation Lands System, and reserves. Before a Final EIS and Record of Decision is issued, the BLM needs to more thoroughly analyze possibly conflicts between the proposed action and this local land use plan, as required by 40 C.F.R. §§ 1502.16(c) and 1506.2(d).

7 SunZia is a highly controversial project. In addition to the concerns highlighted above, we are concerned with the quality and nature of the public process that has been conducted by the BLM for the SunZia project to date. As such, BLM should provide additional opportunities for meaningful public engagement leading up to the Final EIS, so as to comply with the intent and purpose of NEPA. Issues and input gathered from such public engagement should be used by BLM to inform and guide its decision making process. BLM should consider engaging the US Institute for Environmental Conflict Resolution or other professional mediators to ensure productive communication and increase the likelihood of resolving outstanding conflicts.

We appreciate the opportunity to submit these comments.

Sincerely,

Carolyn Campbell
Executive Director

1830	Comment Response
7	Comment noted. The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project has included a total of 22 public meetings and 255 days of public comment. A 45-day public comment period is generally the time provided for a DEIS. The BLM's planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period met BLM requirements and afforded interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that any substantive comments received after the DEIS 90-day comment period and before BLM issues a Final EIS will be considered as much as possible.

1912

From: Jenny Neeley
To: BLM_NM_SunZia_Project
Cc: Jenny Neeley
Subject: SunZia DEIS Comments: Sky Island Alliance
Date: Wednesday, August 22, 2012 4:39:38 PM
Attachments: Sunzia DEIS Comments_SIA Letter Only.pdf

August 22, 2012

Adrian Garcia, Project Manager

Bureau of Land Management
SunZia Southwest Transmission Project
P.O. Box 27115
Santa Fe, NM 87502-0115

Email: NMSunZiaProject@blm.gov

Re: Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Project

Dear Mr. Garcia:

These comments are being submitted in response to the Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Project ("Project"). Sky Island Alliance (SIA) is a non-profit conservation organization dedicated to the protection and restoration of the rich natural heritage of native species and habitats in the Sky Island region of southeastern Arizona, southwestern New Mexico, and portions of Sonora and Chihuahua in northwestern Mexico. SIA works with volunteers, scientists, land owners, public officials, and government agencies to establish protected areas, restore healthy landscapes, and promote public appreciation of the region's unique biological diversity.

Due to the large file size, a hard copy of this letter that includes the referenced figures and appendix is being sent via ground mail. Thank you for your consideration of these and all other relevant issues. Please continue to include SIA as an interested party on this matter and direct all future public notices and documents to me at the address below.

--

Jenny Neeley
Conservation Policy Director & Legal Counsel
Sky Island Alliance
300 E. University Blvd., Ste. 270
Tucson, AZ 85705
P: 520.624.7080 x27
F: 520.791.7709
jenny@skyislandalliance.org

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	See following page(s)

1912

SKY ISLAND ALLIANCE
Protecting our Mountain Islands and Desert Seas

August 22, 2012

Adrian Garcia, Project Manager
Bureau of Land Management
SunZia Southwest Transmission Project
P.O. Box 27115
Santa Fe, NM 87502-0115
Email: NMSunZiaProject@blm.gov

Re: Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Project

Dear Mr. Garcia:

These comments are being submitted in response to the Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Project ("Project"). Sky Island Alliance (SIA) is a non-profit conservation organization dedicated to the protection and restoration of the rich natural heritage of native species and habitats in the Sky Island region of southeastern Arizona, southwestern New Mexico, and portions of Sonora and Chihuahua in northwestern Mexico. SIA works with volunteers, scientists, land owners, public officials, and government agencies to establish protected areas, restore healthy landscapes, and promote public appreciation of the region's unique biological diversity.

SIA is a membership-based, volunteer organization, with over 1,600 members and 250-300 active volunteers across the region. To date we have logged over 100,000 volunteer hours on conservation projects in the region, including monitoring regional wildlife and the movement corridors they use, restoring healthy landscapes, participating in agency planning processes, and working with many different stakeholders to protect the unique biodiversity of this region.

We appreciate the opportunity to comment on this proposed Project. We incorporate by reference those comments SIA submitted jointly with Defenders of Wildlife, as well as those comments submitted by the Cascabel Working Group, the Tucson Audubon Society, the Sierra Club – Grand Canyon Chapter, and the Coalition for Sonoran Desert Protection, which we strongly support. We offer the following additional comments for the agency's consideration, focusing specifically on the potential impacts of this Project on the connectivity and overall resiliency of the Sky Island region.

1 The "No Action" alternative is the only appropriate choice for this Project. The only action alternatives considered in the DEIS are likely to have extremely significant and unacceptable adverse impacts on either the lower San Pedro Valley or the Aravaipa watershed, both of which are widely recognized for their rich biological diversity and provide critically important habitat for dozens of sensitive species. This project will also likely have significant impacts on the connectivity between that habitat, potentially impacting the long-term resiliency of the Sky Island region; however, this DEIS does not adequately assess those potential impacts. The DEIS also fails to sufficiently analyze impacts to sensitive and special status species native to the Sky Island region that may be affected by the Project.

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In addition to these deficiencies, the DEIS is also fundamentally flawed because it fails to consider a scope of reasonable alternatives that meets the stated purpose and need for this Project, in violation of the National Environmental Policy Act (NEPA) and its implementing regulations. Finally, the cumulative impacts analysis included in the DEIS is inadequate, particularly as it relates to the growing effects of climate change in this region.

1. The Only Action Alternatives Presented For This Project Are Likely To Have Significant And Unacceptable Adverse Impacts On Key Wildlife Habitat.

The only action alternatives presented for this project are likely to have extremely significant and unacceptable adverse impacts on either the Lower San Pedro Valley or the Aravaipa watershed, both of which are widely recognized for their ecological value, providing key habitat for many species native to the Sky Island region, including numerous special status species. A map of sensitive areas and adjoining linkages is attached as Figure 1.

A. Proposed routes through the lower San Pedro Valley

1 The lower San Pedro River Valley supports one of the last major free-flowing rivers in the desert southwest and, as such, is important habitat for many species and a key migratory corridor for neo-tropical birds. It is a world-renowned birding area and an important tourist destination. The San Pedro also supports the greatest diversity of mammal species in North America,[1] including mountain lion, black bear, coatimundi, javelina, fox, coyote, badger, three skunk species, mule and white-tail deer, ringtail, raccoon, bobcat, beaver, porcupine, black-tailed prairie dog, and 24 species of bats, as well as many other smaller or lesser known mammal species. In addition, the San Pedro River Valley provides habitat for a great diversity of avifauna and is an important migratory flyway. Recently, the lower San Pedro River Valley has been proposed by the U.S. Fish and Wildlife Service (USFWS) for the establishment of a new National Wildlife Refuge and Collaborative Conservation Initiative (CCI).[2]

2 The Bureau of Land Management's (BLM) "Preferred Alternative" bisects the lower San Pedro River Valley, compromises numerous lands that were acquired specifically for conservation purposes such as the 7B Ranch, and degrades lands identified as part of USFWS's proposed CCI, undermining past, present and reasonably foreseeable future investment in the long-term conservation of this area. This Project would have far-reaching, permanent impacts on the integrity of this currently intact landscape, and cannot be sufficiently mitigated as proposed.

B. Proposed routes through the Aravaipa watershed

Aravaipa Canyon is nationally recognized as one of Arizona's most valuable biological areas.[3] It is known for its scenic towering cliffs, lush riparian vegetation, multiple species of native fish and wildlife, and its astounding beauty. The perennial flow of Aravaipa Creek links three mountain ranges, three Wilderness areas, and maintains migratory corridors for both large mammals and birds, making it a crucial component to maintaining biodiversity and ecological integrity in southeastern Arizona. The Nature Conservancy recently conducted a detailed cumulative effects analysis for this Project that focused on the Galiuro-Aravaipa-Santa Teresa wildland complex and found that, in the

[1] Bureau of Land Management. 1989. Mammal Inventory of the San Pedro Riparian National Conservation Area, Cochise County, Arizona: Final Report. San Pedro Project Office, Safford District.
[2] U.S. Fish and Wildlife Service Lower San Pedro River Collaborative Conservation Initiative Planning Update #1: http://www.fws.gov/southwest/docs/LSPRCIPlanningUpdate1.pdf
[3] Brown, D.E. 1989. Ecological values of Bureau of Land Management wilderness study areas in Arizona. The Wilderness Society. Washington, D.C.

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2	Comment noted. The appendix provided by Sky Island Alliance was reviewed during preparation of the DEIS.

southwest, this area is second only to the Grand Canyon region with regards to size and relative intactness.[4]

In 2005, SIA submitted detailed recommendations to the BLM regarding the Aravaipa Ecosystem Management Plan, proposing that the agency manage almost 35,000 acres of surrounding uplands and tributary drainages on the north and south rim of Aravaipa Canyon primarily to maintain or enhance wilderness characteristics, and to close existing roads and limit motorized uses in this area. We are submitting this report, attached as Appendix A, for the agency's consideration.

2 Both Subroute 4A (north of Mt. Graham) and Subroute 4B (Sulphur Springs Valley) would bisect this area, which is one of the largest unfragmented landscapes in Arizona, and would significantly compromise connectivity between the Galiuro Wilderness and the Aravaipa Canyon Wilderness. In addition to the permanent fragmentation resulting from the transmission line itself, a primary issue of concern in the Aravaipa watershed – and across the Sky Island region generally – is the impact that roads have on the area's hydrology, vegetation and wildlife, as well as on connectivity. The significance of the direct, indirect, and cumulative impacts that result from road construction, which are discussed in further detail below, cannot be overstated. In the Aravaipa Watershed this Project would have far-reaching, permanent impacts on the integrity of this currently intact landscape, and cannot be sufficiently mitigated as proposed.

Recommendation: In light of the significant and permanent adverse impacts to these important areas and the adjoining linkages that are likely to result from all the action alternatives presented, we strongly urge the BLM to choose the "No Action" alternative for this Project.

2. The DEIS Fails To Adequately Analyze Impacts To Regional Connectivity And Special Status Species.

This proposal also likely poses a significant threat to the connectivity between areas of core habitat, potentially impacting the long-term resiliency of the Sky Island region. However, these impacts are not adequately assessed in the DEIS. The DEIS also fails to sufficiently analyze impacts to sensitive and special status species native to the Sky Island region that may be affected by the Project.

A. Applicable NEPA regulations

3 The purpose of an environmental impact statement is to provide a "detailed statement" of the environmental impacts associated with a proposed federal action.[5] The environmental consequences section "forms the scientific and analytic basis" for the comparison of alternatives.[6] This section discusses the direct and indirect effects of the alternatives, the significance of the environmental effects, and the means to mitigate adverse impacts.[7] Direct effects are caused by the action and occur at the same time and place, and indirect effects are "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable."[8] Cumulative impacts also must be considered when analyzing the Project's impacts; these impacts are discussed in a separate section of these comments.

[4] Cumulative Effects Analysis for Proposed SunZia Transmission Line. Rob Marshall, Dale Turner, and Dan majka, The Nature Conservancy, June 18, 2012.
[5] 42 U.S.C. § 4332(2)(c)(i).
[6] 40 C.F.R. § 1502.16.
[7] Id.
[8] *Id.*, 40 C.F.R. § 1508.8.

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3	Please see responses regarding effects analysis submitted by Defenders of Wildlife, Coalition for Sonoran Desert Protection, Sky Island Alliance, and Tucson Audubon Comment Letter No. 2100. Section 2.4.10.1 of the DEIS describes the methodology used to provide an estimate of potential ground disturbance associated with access roads that would be associated with each of the alternative transmission line routes. This model identifies a ground disturbance ratio (acres per mile based on level of existing access and slope), which was applied to every 1/10th of one-mile for each of the Project alternatives to estimate ground disturbance. Ground disturbance associated with access road construction, as well as, other ground disturbing construction activities (e.g., structure pads, tensioning and pulling sites, temporary work areas etc…) were used to assess direct, indirect and cumulative effects to resources throughout the Project Study Corridors.

Effects to be considered in an environmental impact statement include "ecological (such as effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative."[9] Indirect effects may include, among other things, "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."[10]

When discussing the significance of a project's effects, the agency must consider both the context and intensity of the action and its effects.[11] Consideration of the context of a project acknowledges that the significance of an effect "varies with the setting of the proposed action" and thus requires consideration of "several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality." When considering context, "both short and long-term effects are relevant."[12]

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When considering the intensity of the effect, some of the factors to consider include: "Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas; The degree to which the effects on the quality of the human environment are likely to be highly controversial; The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks; ... The degree to which the action may ... cause loss or destruction of significant scientific, cultural, or historical resources; [and] The degree to which the action may adversely affect an endangered or threatened species or habitat that has been determined to be critical under the Endangered Species Act," among others.[13]

NEPA implementing regulations require agencies to "insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements."[14] In order to fulfill the purpose of NEPA, the information used as a basis for the analysis of a project's effects "must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA."[15] Implementing regulations require that an EIS is "supported by evidence that agencies have made the necessary environmental analyses."[16] While conducting the necessary analyses, "the agency shall make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action."[17]

With the effects analysis, NEPA imposes a duty on federal agencies to take a "hard look at environmental consequences" of a proposed action.[18] Under NEPA, "conclusory remarks [and] statements that do not equip a decisionmaker to make an informed decision about alternative courses of action, or a court to review the Secretary's reasoning" are insufficient.[19] The agency cannot just

[9] 40 C.F.R § 1508.8.
[10] *Id.*
[11] 40 C.F.R. § 1508.27
[12] 40 C.F.R. § 1508.27(a).
[13] 40 C.F.R. § 1508.27(b).
[14] 40 C.F.R. § 1502.24.
[15] 40 C.F.R. 1500.1.
[16] 40 C.F.R. §§ 1500.2(b); 1502.24.
[17] 40 C.F.R. § 1502.9.
[18] *Nat. Resources Def. Council v. Morton*, 458 F.2d 827, 838 (D.C. Cir. 1972).
[19] *Nat. Resources Def. Council v. Hodel*, 865 F.2d 288, 298 (D.C. Cir. 1988).

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simply state that impacts may occur, they must provide an analysis of the nature and extent of those impacts.[20]

3 This DEIS as currently drafted is clearly deficient, and does not meet the spirit or the letter of NEPA or its implementing regulations. We incorporate by reference the specific concerns regarding the DEIS effects analysis that are raised in SIA's comments submitted jointly with Defenders of Wildlife as well as the comments submitted by the other interested parties mentioned above, which we support and fully incorporate herein. In addition to those comments, SIA is also extremely concerned by BLM's failure to meaningfully assess the direct, indirect and cumulative impacts resulting from the significant road construction proposed as part of this Project, and the effects of the resulting fragmentation on wildlife corridors and reduction in overall regional resiliency that is likely to result from this project.

B. The DEIS Fails to Adequately Assess Impacts Resulting from Road Construction

Roads have significant direct and indirect impacts on the region's hydrology, vegetation and wildlife. Roads are known to have a zone of effect that can extend from 1/4 mile up to two miles from the actual footprint of the road. The amount of habitat that is fragmented and affected by the road is therefore much greater that just the network of roads.[21] Wilcox and Murphey (1983) concluded that habitat fragmentation is the most serious threat to biological diversity and is the main cause of the current extinction crisis. It is estimated that roads have an ecological effect on 94% of the United States.[22]

4 Roads are known to transform the physical conditions both on and adjacent to them by directly altering the soil density, temperature, soil-water content, light, dust, surface-water flow, pattern of run-off, and sedimentation.[23] Most sediment enters water bodies through overland flow, but dust from roads is a source of fine sediments, nutrients and contaminants to aquatic ecosystems.[24] This dust also settles on plants, with physical and chemical impacts that can disrupt photosynthesis, respiration and transpiration, physically injure plants,[25] and alter plant community structure.[26]

There is a positive feedback loop between primitive roads and habitat destruction. Roads in primitive areas lead to the destruction of habitat through activities such as poaching, grazing, campsite development, off-road vehicle joyriding, and the creation of unauthorized travelways off already established routes.[27] Once these activities are exhausted new roads are then required to reach more remote areas to continue the same activities.[28]

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[20] *See Defenders of Wildlife v. Babbitt*, 130 F.Supp. 121, 138 (D.D.C. 2001) (holding an EIS insufficient because while it stated that noise would increase and pronghorn and their habitat would be disturbed, there was no analysis of the nature and extent of the impacts on the pronghorn) (citing *NRDC v. Hodel*, 865 F.2d at 299).
[21] Hartley D.A., J.L. Thomson, P. Morton, E. Schlenker-Goodrich. 2003. Ecological effects of a transportation network on wildlife: A spatial analysis of the Upper Missouri River Breaks National Monument. The Wilderness Society, Washington D.C.
[22] Soule, Michael. 2000. Forget About Building the Road to Nowhere. Christian Science Monitor. October 20, 2000.
[23] Trombulak, Frissell. 2000. Review of the ecological effects of roads on terrestrial and aquatic communities. Conservation Biology 14(1): 18-26.
[24] Gjessing, E., E. Lygren, L. Berglind, T. Gulbrandsen, R. Skanne. 1984. Effect of highway runoff on lake water quality. Science of the Total Environment 33:247-257.
[25] Farmer, A.M. 1993. The effects of dust on vegetation, a review. Environmental Pollution 79: 63-75.
[26] Auerbach, N.A., M.D. Walker, D.A. Walker. 1997. Effects of roadside disturbance on substrate and vegetation properties in arctic tundra. Ecological Applications 7:218-235.
[27] Soule 2000.
[28] Crumbo, K. 2002. Review of the Ecological Impacts of Roads. Arizona Wilderness Coalition.

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4	4.1 The DEIS (Table H-6, H-7, throughout Section 4.6) acknowledges the sensitivity of the portion of Subroutes 4A/B in the Galiuro Mountains. The lack of existing access in this area contributed to the decision to select Subroute 4C2c as the BLM preferred alternative. However, mitigation measures to prevent erosion, deposition of sediments into jurisdictional waters, and minimize adverse impacts to ESA-listed fish species would be required in any location. 4.2 Comment noted. The DEIS (Section 4.6) acknowledges that roads and road use can affect wildlife directly and indirectly. However, information regarding the study area or the majority of species present in the Project area is not available in detail with regard to the effects of roads. 4.3 The Noxious Weed Management Plan, Appendix B-2 of the POD, describes measures to survey for and control invasive plants within the Project area. The final version of this plan will include information on any site-specific concerns. The pages cited in the comment are a part of the introduction to Chapter 4 of the DEIS. This is a summary, and should not be taken as a detailed, final statement on what would occur. The reference to roads being reclaimed within 5 years, for instance, refers only to temporary access roads. For any areas of temporary disturbance, reclamation would begin as soon as appropriate after use of that area ceases. Unless monitoring indicates otherwise, the need for proactive reclamation activities is not anticipated to exceed 5 years. At that point, recovery is anticipated to be self-sustaining and to follow natural processes. However, additional activities would take place after the 5th year if indicated by monitoring. 4.4 Locations of permanent or temporary access roads will be determined during detailed engineering, and would be presented in the final POD following the Record of Decision. The DEIS (Table 2-7) and FEIS provide estimates of the range of disturbance that may be required for access roads. 4.5 The FEIS (Section 4.6.3.1) notes that transmission lines can affect wildlife through several mechanisms. However, compared to other types of linear developments, transmission lines appear to be relatively porous to wildlife in the Southwest. No information is available to indicate that transmission lines and existing access roads form a barrier to or substantially impede movement of wildlife in the Southwest, although recreational or maintenance traffic can cause ongoing, intermittent disturbance. 4.6 The DEIS bases its statements on existing conditions, as described in Arizona's Wildlife Linkage Assessment. This document discussed railways, canals, border security, highways, and major paved roads as the primary barriers to dispersal in the region. The DEIS does not state that impacts would not occur, but that transmission lines and access roads appear to be a relatively minor source of fragmentation, particularly within the referenced wildlife linkages. 4.7 The FEIS (Section 4.6.4.5) clarifies that the nearest *known* reproducing population of Jaguars is approximately 140 miles south of the United States-Mexico border. No portion of proposed critical habitat for the Jaguar is within the Project area or north of Interstate 10. Potential effects to the Jaguar are addressed in detail through Section 7 consultation, underway with the USFWS.

The Impact of Roads on Hydrology: Because of the nature of moving water, the physical effects from roads can be seen long distances from the direct incursion of the road.[29] Perennial flows, such as those found in Aravaipa Creek, are threatened by sediment that is washed from roads and enters the watershed, through both erosion and surface run-off. Perennial flows are also threatened by increased sediment entering the creek from road dust. It has been found that high concentrations of suspended sediment may directly kill aquatic organisms and impair aquatic productivity, including reducing the productivity, survival, and growth of fish.[30] This is of particular concern in habitat for special status species, such as the federally endangered loach minnow and spike dace, both of which have designated Critical Habitat that will likely be impacted by this Project.

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Arid lands in the southwest are particularly vulnerable to disturbances caused by off-road vehicles which compact soil, change soil porosity, and decrease infiltration capacity. This leads to an increase in runoff during rainfall and a subsequent increase in soil erosion because rainfall cannot filter as readily into the soil.[31] Iverson et al. found that the largest increase in compaction of the soil per pass of vehicle tires occurred in the first few passes. Because such a large proportion of soil compaction damage occurs in initial vehicle passes, even so-called "temporary" road construction is a serious threat to the health of the affected watershed, even when those roads do not become established routes. The continued physical disturbances caused by roads can be reduced by remediation of the roads;[32] however, the consequences of sedimentary delivery are long term and cumulative.[33]

The Impacts of Roads on Wildlife: Roads impact animal behavior, energy expenditure and reproductive success.[34] Small rodents and invertebrates will avoid crossing roads even when the roads are narrow and unpaved, meaning even small roads contribute to the fragmentation of populations and create habitat patches that isolate organisms. Roads also have measurable effects on large mammals such as bighorn sheep, bear, deer and mountain lions. Roads were found to increase the heart rate and therefore the metabolic rate and energy expenditure of bighorn sheep in the proximity of the road, regardless of any human use on the road.[35] It has also been found that large mammals such as mountain lions have threshold road densities above which the habitat is no longer able to function naturally and support a sustained population of the large predators.[36]

The Impact of Roads on Plants: "Roads provide a major conduit for the spread of exotic plants into natural areas, particularly in arid and semiarid landscapes of the American West, where exotic annual

[29] Richardson, E. V., B. Simmons, S. Karaki, M. Mahmood, and M. A. Stevens. 1975. Highways in the river environment: hydraulic and environmental design considerations training and design manual. U.S. Department of Transportation, Federal Highway Administration, Washington, D.C.
[30] Newcombe, C.P., and J.O.T. Jensen. 1996. Channel suspended sediment and fisheries: a synthesis for quantitative assessment of risk. North American Journal of Fisheries Management 16: 693-727.
[31] Iverson R.M., B.S. Hinckley, R.M. Webb. 1981. Physical effects of vehicular disturbances on arid landscapes. Science 212: 915-917.
[32] Weaver, W.E, M.M. Hektner, D.K. Hagans, L.J. Reed, R.A. Sonneville, and G.J. Bundros. 1987. An evaluation of experimental rehabilitation work, Redwood National Park. Technical Report. 19. Redwood National Park, Arcata California; Harr. R.D., R.A. Nichols. 1993. Stabilizing forest roads to help restore fish habitat: a northwest Washington example. Fisheries 18: 18-22.
[33] Hagans, D.K., W.E. Weaver, M.A. Madej. 1986. Long-term on-site and off-site effects of logging and erosion in the Redwood Creek Basin, northern California. Pages 38-65 in Papers present at the American Geophysical Union meeting on cumulative effects. Technical bulletin 490. National Council for Air and Stream Improvement, New York.
[34] Trombulak & Frissel 2000
[35] MacArthur, R.A., R.H. Joshnston, and V. Geist. 1979. Factors influencing heart rate in free ranging bighorn sheep: a physiological approach to the study of wildlife harrassment. Canadian Journal of Zoology 57: 2010-2021.
[36] Forman, R.T.T. and R.D. Deblinger. 2000. The ecological road-effect zone of a Massachusetts (U.S.A.) Suburban Highway. Conservation Biology 14(1): 36-46.

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4	4.8 The DEIS does not state that Ocelots can only use riparian woodlands, but that these would likely be areas with a higher potential for Ocelot use. These statements are based on the best available information on northern Ocelots, from studies conducted in Texas. Although Ocelots have been photographed on trail cameras in Sonora, detailed habitat use studies have not been conducted in the Southwest. Potential impacts to the Ocelot are addressed in detail through Section 7 consultation, underway with the USFWS. 4.9 Potential impacts to the Southwestern Willow Flycatcher are addressed in detail through Section 7 consultation, underway with the USFWS. 4.10 Section 7 consultation is ongoing with the USFWS, for the BLM preferred alternative only. No Spikedace or Loach Minnows are known to be present on the BLM preferred alternative, including downstream from any river crossings. 4.11 The DEIS does not discount the potential for impacts to amphibians. Preservation of stock tanks and natural water sources for wildlife use is included as a standard mitigation measure. Streams and major washes would be spanned, and would not be crossed by access roads. No Chiricahua Leopard Frogs are anticipated to occur along any alternative. The Ladder Ranch populations, described in the DEIS (Section 3.6.1.1), have been surveyed extensively over multiple years and have been found no closer to the Project than approximately 3.5 miles upstream in a single drainage, and much further in all other drainages. No other populations are known within reasonable dispersal range of any alternative.

grasses and forbs pose a major conservation challenge."[37] Roads promote the spread of exotic species through the accidental movement of alien seeds[38] and through the high rates of soil disturbance on and adjacent to the road.[39] Frequently disturbed environments favor the growth of invasive species and some non-native species that are adapted to reproduce effectively in frequently disturbed habitat. Tyser and Worley note "both the construction of new roads and the improvement of existing roads appear to be important factors in the ongoing spread of exotic plants throughout [the] landscape." Exotic plants provide poor habitat for wildlife that is adapted to utilize native vegetation, and can have serious long-term effects on native biodiversity. Research has shown the importance of maintaining and managing roadless areas and the restoration of areas to a roadless status.[40]

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According to the DEIS, BLM estimated the potential impacts of the proposed road construction based on "the estimated ground disturbance associated with using existing access roads, or upgrading or constructing access roads. Estimates were based on assigned access levels that considered slope, miles of new or existing roads required, and potential spur roads required." DEIS at 4-3. The BLM also assumes in its analysis that the impacts resulting from access roads will be "temporary and short term" because the Applicant promises to reclaim these areas within five years. DEIS at 4-1.

This exceedingly narrow analysis fails to take into account the fact that a road's impact can extend far beyond its actual footprint. It also fails to take into account the fact that roads in this region, once created, are very likely permanent due to the extreme difficulties in decommissioning roads and revegetating disturbed areas in this arid region. These significant deficiencies call into question the reliability of the BLM's assessment of impacts stemming from road construction.

In addition, the potential impacts of roads on hydrology, wildlife, vegetation and other resources are only summarily listed in each section, and are merely "conclusory remarks or statements," without any consideration of the impacts' context and intensity, in direct violation of NEPA implementing regulations and associated case law. In fact, because site-specific information is not available in the DEIS, the assessment of impacts resulting from the proposed road construction is speculative at best, which is simply not adequate for the purposes of NEPA.

Recommendation: We recommend that the BLM choose the "No Action" alternative. However, should the BLM choose one of the action alternatives, the agency must first revise or supplement this DEIS to include a meaningful and robust examination of the direct, indirect and cumulative impacts that are likely to result from road construction, including those impacts that are known to occur some distance from the road's actual footprint. The revised or supplemental DEIS must also include an assessment of the construction of access roads that remain on the ground permanently, which is far more likely and reasonably foreseeable than successful reclamation of these areas within five years. Finally, the new assessment must provide site specific information and must examine impacts related to road construction in light of their context and intensity.

C. The DEIS Fails To Adequately Consider The Likely Impacts To Wildlife Linkages

By definition, an intact healthy landscape allows wildlife to move between core areas of protected wildland blocks where species, both plant and animal, have sufficient resources to survive,

[37] Gelbard, J.L., J. Belnap. 2003. Roads as conduits for exotic plant invasions in a semiarid landscape. Conservation Biology 17(2): 420-432.
[38] Schmidt, W. 1989. Plant dispersal by motor cars. Vegetation 80: 147-152.
[39] Tyser, R.W. and C. A. Worley. 1992. Alien flora in grasslands adjacent to road and trail corridors in Glacier National Park, Montana (U.S.A.). Conservation Biology 6(2): 253-262.
[40] Strittholt, James R., and Dominick A. DellaLSala. 2001. Importance of Roadless Areas in Biodiversity Conservation in Forested Ecosystems: Case Study of the Klamath-Siskiyou Ecoregion of the United States. Conservation Biology 15(6):1742-1754.

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reproduce, and otherwise facilitate ecological processes. Plants and animals move across the landscape in many ways and for many complex reasons, and generally choose the most efficient or permeable movement corridors available on the landscape when connecting areas of suitable habitat. Poor connectivity between core habitats not only impacts large, far-ranging species, it can also significantly impact habitat specialists such as reptiles, rodents, ground birds, and others. When connectivity is reduced, it reduces opportunities for these smaller species to fulfill life-history needs and exposes them to increased risks of predation and mortality. Smaller animals and plants to a certain extent depend on local habitat connectivity to find mates, food and water resources, and refugia, and when they must modify movement patterns to meet those needs they expose themselves to higher mortality.

Animals move both north and south along the mountain ranges of the region and east and west across wide valleys depending on life-history characteristics and needs. Animals such as mountain lions, black bears, spotted owls, and jaguars can have home ranges and/or dispersal distances that cover multiple mountain ranges and intervening valleys. The ability for these and other species to disperse is paramount. "For fragmented populations, dispersal is key to survival…There is also strong theoretical support for the contention that the capacity for animals to move through the landscape is fundamental to conservation of natural ecosystems."[41,42]

This project will potentially impact at least four important wildlife corridors as identified by the Arizona Wildlife Linkages Workgroup (AWLW), a multidisciplinary collaborative partnership that conducted a comprehensive, statewide assessment of large blocks of protected habitat, the potential wildlife movement corridors between those core blocks of habitat, and the factors threatening to disrupt these linkage zones.[43] According to the DEIS, the potentially impacted wildlife corridors include Galiuro–Pinaleño–Dos Cabezas Linkage, Rincon–Santa Rita–Whetstone Linkage, Tucson–Tortolita–Santa Catalina Mountains Linkage, and the Ironwood–Picacho Linkage. DEIS at 4-86.

For each of these linkages, the DEIS mentions the impacts of the transmission line itself, but it completely ignores the potentially far greater impacts that the associated road construction will have on the functionality of those migration corridors. For example, in the assessment of impacts to the Galiuro–Pinaleño–Dos Cabezas Linkage, the DEIS states that, "The Project would introduce a linear feature in the northern portion of the valley…however, transmission lines are porous to most wildlife movement, and the greatest potential for impacts would be during the development phase of the Project." DEIS at 4-86. However, the statement that "transmission lines are porous to most wildlife movement" is not supported by any evidence, and in fact is incorrect for many species of sensitive wildlife. In addition, the assertion that "the greatest potential for impacts would be during the development phase of the Project" completely ignores the long term direct, indirect and cumulative impacts of associated road construction on this wildlife corridor.

The DEIS also summarily dismisses the cumulative impacts that this project will have on wildlife linkages, concluding without any evidence that the additive effects of this project on the potentially impacted linkages will be non-significant. For example, the DEIS simply dismisses the potential for any significant impacts in the Rincon–Santa Rita–Whetstone Linkage, stating that "I-10 and the UPRR are significant, pre-existing barriers to wildlife movement south of the Project, such that any

[41] Opdam, P. 1990. Dispersal of fragmented populations: the key to survival. pp. 3-17 in Species Dispersal in Agricultural Habitats (Eds. R.G.H. Bunce and D.C. Howard). (Belhaven Press: London).
[42] Bennet, A.F. 2003. Linkages in the Landscape: The Role of Corridors and Connectivity in Wildlife Conservation. IUCN, Gland, Switzerland and Cambridge, UK. Xiv + 254 pp.
[43] Arizona Wildlife Linkages Workgroup. 2006. *Arizona's Wildlife Linkages Assessment.* Accessed at http://www.azdot.gov/inside_adot/OES/AZ_WildLife_Linkages/assessment.asp.

additive effects from Project development would not contribute substantially to a reduction of wildlife movement potential." DEIS at 4-87.

Impacts to the Tucson–Tortolita–Santa Catalina Mountains Linkage are similarly dismissed because BLM asserts that "function of this linkage is compromised by the presence of existing linear developments, including the UPRR right-of-way and I-10. These features create a substantial barrier to wildlife movements through the area." DEIS at 4-87. Likewise, impacts to the Ironwood–Picacho Linkage are dismissed for almost identical reasons, with the DEIS stating that "Function of this linkage is reduced by existing linear features that include the CAP, the UPRR, and I-10. … The proposed Project … would represent a very small contribution of further fragmentation to the linkage." DEIS at 4-87.

There is no evidence that the impacts from this project, which includes the permanent placement of a transmission line and construction of numerous, likely permanent, associated access and maintenance roads "represents a very small contribution of further fragmentation to" these linkages. To the contrary, this project will likely significantly contribute to the ongoing fragmentation of these areas in the long-term, particularly considering the permanent right-of-way that will be associated with the transmission line as well as the numerous access and maintenance roads that will very likely remain on the landscape permanently. A map of the affected wildlife linkages that illustrates the severe fragmentation already occurring is attached as Figure 3.

4

Recommendation: We strongly urge the BLM to choose the "No Action" alternative. However, should BLM choose an action alternative, it must, at a minimum, take a hard look at the existing fragmentation in these areas and meaningfully assess this project's contribution to that fragmentation in light of the significant impacts likely to result from the transmission line and associated roads.

D. The DEIS Fails to Adequately Consider the Likely Impacts to Special Status Species

Jaguar *(Panthera onca)*: The jaguar is a large and wide-ranging species whose range extends from southern Arizona and New Mexico south throughout North, Central, and South America. The home range for male jaguars is between nineteen and fifty-three square miles, and the home range for female jaguars is between ten and thirty-seven square miles; however, jaguars have also been observed roaming more broadly, with movements of 500 miles having been recorded. Jaguars are habitat generalists that utilize a wide range of habitat types. The past decade has witnessed a remarkable resurgence of the jaguar in its historical range within the United States. In 1997 the USFWS listed the U.S. population as endangered, and in August 2012, the USFWS proposed to designate close to 900,000 acres in the Sky Island region as Critical Habitat for this species.[44]

Jaguar presence in southeastern Arizona during the 20th century is well-documented. Historical records show that at least six jaguars were killed or photographed in the Patagonia Mountains alone between 1904 and 1965. In addition, a jaguar was photographed in the Baboquivari Mountains in 1996, and from 2001 to 2009, biologists monitored at least two jaguars on several mountain ranges, including the Atascosa, Tumacacori, Baboquivari, and Pajarito Mountains, as well as in the Altar Valley. In 2005, SIA documented jaguar presence approximately 15 miles south of the border near the Pajarito Wilderness Area, and in 2010 and 2011, SIA documented two different jaguars thirty miles south of the border in the Sierra Azul Mountains. In June 2011, the Arizona Game and Fish Department (AZGFD) reported a sighting in the Santa Rita Mountains, and most recently, in November 2011, the AZGFD confirmed a hunter's jaguar sighting within the Sierra Vista District of the Coronado National Forest.

[44] 77 Fed. Reg. 50214 (August 20, 2012).

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This region is considered suitable habitat for the jaguar, and mountain ranges across the Coronado National Forest generally provide important wildlife migration corridors for jaguars moving north through the borderlands from Mexico into Arizona. With its newly proposed Critical Habitat designation, the USFWS officially considers many areas in southeastern Arizona to be "occupied" by the species, and regardless of previous sightings all habitat included in the proposed designation is considered essential to the conservation of the species.[45]

The DEIS fails to provide complete and specific information regarding historic and current jaguar sightings in Arizona and regionally, and the information relied upon in the DEIS is outdated and inaccurate. For example, the DEIS states, "since the northernmost breeding population of the Jaguar is more than 140 miles south of the United States-Mexico border, and farther from the study corridor, the potential for the Jaguar to occur within the Project study area is very low." DEIS at 3-89. This statement has no basis in fact considering the multiple recent sightings and recently proposed Critical Habitat designation in this region, and it highlights the significant deficiencies of the analysis of potential impacts to this species.

4

Comprehensive field surveys to detect and monitor this elusive cat species have not been conducted to date, and their habitat selection in the northern portion of their range is poorly understood. Therefore, instead of dismissing potential effects, the BLM must analyze the impacts this Project could have upon vegetation associations jaguars have been known to utilize, habitat connectivity for this species, and increased human presence and disturbance in areas containing what is thought to be suitable habitat.

Recommendation: We strongly urge the BLM to choose the "No Action" alternative. Any increase in linear barriers, road densities or other fragmentation of habitat in this region is likely to negatively impact this species. It is critical that habitat and movement corridors are protected to the greatest extent possible in order to preserve genetic diversity and healthy stable populations of these wide-ranging and critically endangered carnivores. Should the BLM choose an action alternative, the agency must consult with the USFWS and state wildlife agencies regarding conservation measures for this species and mitigate consistent with the proposed Critical Habitat designation and current recovery plan for this species.

Ocelot *(Leopardus pardalis)*: The ocelot is a primarily noturnal meso-carnivore whose range extends from southern Arizona and southern Texas through North, Central, and South America into northern Argentina and Uruguay. Ocelot habitat varies greatly throughout its distribution, from tropical rainforest, pine forest, gallery forest, riparian forest, semideciduous forest, and dry tropical forest, to savanna, shrublands, and marshlands. The Sonoran subspecies found in Arizona has been documented repeatedly using madrean oak woodland habitat, which is found throughout the Sky Island region.

Despite the fact that ocelots are notoriously difficult to detect, particularly in low densities such as they probably exist in their northern range, there have been multiple sightings in southeastern Arizona in recent years, and there is a known breeding population of ocelots in Sonora, Mexico, thirty miles south of the international border. In November 2009, SIA documented the first live ocelot in approximately forty years in southern Arizona, and in 2011 and 2012 the Arizona Game and Fish Department documented ocelots on several occasions in the Huachuca Mountains, most recently in April 2012.

[45] *Id.* at 50227.

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Road mortality has consistently been documented as the leading cause of ocelot decline,[46] while areas of high road densities are likely to affect habitat preference by the cat.[47] In 2008, SIA documented a road-killed ocelot on Highway 15 in northern Sonora, approximately 25 miles south of the international border. In 2010, the AZGFD reported a road-killed ocelot on highway 60 near Superior, Arizona. This ocelot was confirmed to be of wild origin.[48] In addition to increased road-kill, high road densities contribute to habitat destruction, increased human disturbance, and risks of poaching.

Mountain ranges across the Coronado National Forest generally provide important habitat and migration corridors for ocelots moving north through the borderlands from Mexico into Arizona. The recent ocelot sightings reveal the geographic distribution of an established trans-boundary population and confirm the species' presence in Arizona.

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The DEIS fails to provide complete and specific information regarding historic and current ocelot sightings in Arizona and regionally, and the information relied upon in the DEIS is outdated and inaccurate. For example, the DEIS states that, "Recent records of Ocelots in Arizona probably represent transient individuals (AZGFD 2004a). Suitable habitat is likely limited to riparian areas such as remnant segments of gallery forest along the San Pedro River that have connectivity with habitat farther south in Mexico." DEIS at 3-90. There is no evidence to support any part of this statement, and in fact the best available data indicates that suitable habitat is not limited to riparian areas but instead includes madrean oak woodland habitat, which has been repeatedly used by the ocelots recently documented in this region. Until more field research is conducted to study and determine ocelot habitat selection in this northern portion of its range, all vegetation types with dense cover and an adequate prey base should be considered potential ocelot habitat.

The DEIS also states that "a dead Ocelot was recovered in 2009 from Gila County, Arizona," but also implies that it is unknown whether the cat was of wild origin or not. DEIS at 3-90. In fact, this cat was confirmed to be of wild origin, and very likely traveled through the Project's study corridor. Finally, the DEIS erroneously states that "the potential for the Ocelot occurring within the study corridor is low in Arizona." DEIS at 3-90. However, the best available science indicates that this is incorrect, with at least two recent ocelot sightings occurring near or within the Project study corridor.

Recommendation: We strongly urge the BLM to choose the "No Action" alternative. Any increase in linear barriers, road densities or other fragmentation of habitat in this region is likely to negatively impact this species. It is critical that habitat and movement corridors are protected to the greatest extent possible in order to preserve genetic diversity and healthy stable populations of these wide-ranging and critically endangered carnivores. Should the BLM choose an action alternative, the agency must consult with the USFWS and state wildlife agencies regarding conservation measures for this species and mitigate consistent with the current draft recovery plan, which is being developed by the USFWS for this species and will likely be finalized prior to the construction of SunZia.

Southwest Willow Flycatcher (*Empidonax traillii extimus*): The endangered southwestern willow flycatcher is found at various locations in the project area, with designated critical habitat along

[46] Haines et. al., 2005.
[47] U.S. Fish and Wildlife Service. 2010. Draft Ocelot (*Leopardus pardalis*) Recovery Plan, First Revision. U.S. Fish and Wildlife Service, Southwest Region, Albuquerque, New Mexico.
[48] De Young, R. and J. Holbrook. (2010). Analysis and interpretation of ocelot material lineages from road-killed ocelots in Texas and Arizona. A report to the US Fish and Wildlife service and Texas Parks and Wildlife Department. Texas A&M University, Kingsville.

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numerous riparian corridors – the species' breeding habitat – in the region (See Fig. 2). This species is threatened by habitat loss, particularly in these riparian areas.

Recommendation: We strongly urge the BLM to choose the "No Action" alternative. Should the BLM should choose an action alternative, it must consult with the USFWS regarding conservation measures for the southwestern willow flycatcher. Avoidance, minimization, and mitigation measures consistent with the recovery plan (and implemented in consultation with USFWS) may be warranted for any instances in which the transmission corridor crosses a floodplain or other riparian habitat area. Engineering of structures to span over flycatcher habitat is the preferred avoidance method, and vegetation preservation and/or restoration actions should be implemented where SunZia interacts with flycatcher habitat.

4

Loach minnow *(Tiaroga cobitis)* and spikedace *(Meda fulgida):* Aravaipa Canyon contains seven native fish species including the federally listed spikedace and loach minnow. The BLM notes that "no other Arizona stream is known to contain so many native fish in the absence of substantial numbers of introduced species."[49] The USFWS has designated Critical Habitat for both the loach minnow and spike dace in Aravaipa Canyon (See Fig. 2) and other areas in Arizona and New Mexico. Threats to both species include predation, groundwater pumping, surface water diversions, impoundments, and channelization. These changes to the flow regime may decrease the amount of available habitat.

The DEIS only considers impacts to areas where perennial water occurs. However, many fish species utilize ephemeral waters for dispersal, etc. The BLM must consider how the various fish species found in or near the study corridor may be affected for all water sources.

Recommendation: We strongly urge the BLM to choose the "No Action" alternative. Should the BLM should choose an action alternative, it must consult with the USFWS regarding conservation measures for the loach minnow and spoke dace, and in consultation with USFWS implement avoidance, minimization, and mitigation measures consistent with the recovery plans and Critical Habitat designations for each species.

Sensitive Frog Species: The Sky Island region is considered a herpetological hotspot, as it contains the highest diversity of whiptail lizards and rattlesnakes in the United States, supports rare and unique animals such as the Chiricahua leopard frog and Sonora tiger salamander, and plays host to amazing ecological phenomena such as the explosive-breeding desert anuran assemblage that emerges from the ground during the monsoon and where up to ten species of toads and an occasional frog try to out- call and out-breed their brethren. Several sensitive frog species are known to occur in the project area (See Fig. 2).

Impacts from roads and road systems are varied[50] but include direct mortality, vectors for invasive species and disease, loss of habitat, barriers to dispersal and other movements, sedimentation in aquatic systems, access to illegal collection areas, and noise and light impacts to behavior and movement.

The DEIS greatly downplays these and other potential impacts to amphibian species. In addition, the DEIS assumes that such species will only be affected in areas where perennial water occurs.

[49] BLM, 1988.
[50] Kassar, C. 2005. Motorized recreation at a crossroads: lessons from the past converge with management practice of the future. Friends of the Inyo.

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numerous riparian corridors – the species' breeding habitat – in the region (See Fig. 2). This species is threatened by habitat loss, particularly in these riparian areas.

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Recommendation: We strongly urge the BLM to choose the "No Action" alternative. Should the BLM should choose an action alternative, it must consult with the USFWS regarding conservation measures for the loach minnow and spoke dace, and in consultation with USFWS implement avoidance, minimization, and mitigation measures consistent with the recovery plans and Critical Habitat designations for each species.

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[49] BLM, 1988.
[50] Kassar, C. 2005. Motorized recreation at a crossroads: lessons from the past converge with management practice of the future. Friends of the Inyo.

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However, intermittent and ephemeral waters can be very important to a variety of species, including various amphibians.

The BLM must consider ephemeral and intermittent waters, not just perennial streams. Ephemeral and intermittent drainages can be of great importance to these species.[51] For example, regarding the federally listed Chiricahua leopard frog, the USFWS states that, "defining the action area of a proposed project must consider the reasonable dispersal capabilities of the species, and the likelihood/extent of any downstream or upstream effects that might arise from the proposed action."[52]

Other amphibian species are likely to be similarly affected. The BLM needs to reconsider impacts to amphibian species, providing consideration to all areas that could be utilized by the species, not just perennial waterways.

Recommendation: We strongly urge the BLM to choose the "No Action" alternative. Should the BLM should choose an action alternative, it must consult with USFWS regarding federally listed species regarding conservation measures and implement avoidance, minimization, and mitigation measures consistent with the recovery plans and critical habitat designations for each species. The BLM must also consider the importance of ephemeral and intermittent waters, not just perennial streams, for all affected amphibian species.

4. The Stated Purpose And Need For This Project Is Inconsistent With The Scope Of "Reasonable" Alternatives Considered In The DEIS.

The stated purpose and need for this project is inconsistent with the scope of reasonable alternatives considered in the DEIS, in violation of NEPA. The BLM is required to "specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action."[53] The agency must identify the purpose and need to which it is responding before it can determine the scope of reasonable alternatives that should be considered in order to meet that purpose and need. "The stated goal of a project necessarily dictates the range of 'reasonable' alternatives."[54] The Council for Environmental Quality has made it clear that when an agency is determining the scope of alternatives to be considered, the emphasis must be on what is 'reasonable,' not on whether a private proponent or applicant prefers. "Reasonable alternatives include those that are practical or feasible from a technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant."[55]

The purpose of this project has been repeatedly framed by both the Applicant and the BLM as meeting a need for increased capacity for transmission of electricity generated from "primarily renewable energy sources." This framing continues, despite the numerous legitimate complaints made by SIA and other interested parties that the true purpose of this project actually seems to be to increase transmission capacity for natural gas generation, which seems particularly evident in light of the fact that the Applicant itself had previously made clear a primary purpose of this project is to provide transmission capacity for its own proposed 1,000-MH natural gas fired power plant located in Bowie AZ, which until very recently was considered an integral part of the SunZia transmission line project.

[51] Southwest Endangered Species Act Team. 2008. Chiricahua leopard frog (Lithobates [*Rana*] *chiricahuensis*): Considerations for making effects determinations and recommendations for reducing and avoiding adverse effects. U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, Albuquerque, New Mexico. 75 pp.
[52] *Id.*
[53] 40 CFR §1502.13.
[54] *City of Carmel-by-the-Sea v. Dept. of Trans.*, 123 F.3d 1142, 1155 (9th Cir. 1997).
[55] Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 48 Fed. Reg. 18,026 (March 16, 1981).

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5	The SunZia project includes proposed 500 kV transmission lines and substations, but power generation projects are not part of the proposal, and the analysis of direct environmental effects of power generation projects is not part of the EIS studies. The cumulative effects of potential power generation projects, including the Bowie Power Station, are evaluated in the DEIS (Section 4.17) based on estimates of future energy development scenarios. Although the potential benefits of increased renewable energy production have been recognized, it is acknowledged that mitigating negative environmental and economic impacts by an increase in renewable energy production is uncertain. A reasonable range of alternatives was considered and analyzed in the DEIS that would meet the purpose and need. Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines. The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation. The Afton Solar Energy Zone (SEZ) (designated in the Final PEIS for Solar Energy, July 2012) is located within the NMSO Qualified Resource Area (QRA) as shown on Figure 4-3 of the DEIS. As part of the purpose and need of the SunZia Project, the Midpoint Substation would be a potential interconnection point for future solar energy development projects that may be located within this QRA, including the Afton SEZ. It is noted there is an existing 345kV transmission line between the Afton SEZ and the Midpoint Substation, as shown on Figure 4-1 of the DEIS.

While it is clear that, in light of these complaints both the agency and Applicant have tried to temper their description of this project's purpose and need, the fact remains that transmission of renewable energy continues to be put forth by both the BLM and the Applicant as the primary goal of this project. In fact, the BLM states that "The Renewable Energy Order (Secretarial Order 3285) —which makes the production, development, and delivery of renewable energy a top priority—as well as the energy goals of the EPAct, supports the need for the Project because implementing it would encourage the development of additional renewable generation sources." DEIS at 1-5 (emphasis added).

5 The Applicant's also clearly states that transmitting renewable energy is a primary objective, asserting that "the project is needed to increase available transmission capacity in an electrical grid that is currently insufficient to support the development, access, and transport of additional energy generating resources, including renewable energy, in New Mexico and Arizona." DEIS at 1-7. The Applicant also states that "the Project would assist load-serving utilities in meeting the requirements to address energy delivery obligations to meet state renewable portfolio standards (RPS)," and that "the Project would be colocated with areas of undeveloped renewable resource potential to provide a path for energy delivery." DEIS at 1-5 and 1-6 (emphasis added).

The issue of whether the stated purpose and need for this project is misleading and incomplete is thoroughly addressed in comments SIA submitted jointly with Defenders of Wildlife, as well as those comments submitted by the Sierra Club, the Cascabel Working Group, the Tucson Audubon Society, and others. We concur with these comments and will not reiterate them here. However, assuming that the purpose and need of this project is in fact to transmit primarily renewable energy, the agency has clearly failed to consider a reasonable range of alternatives that could potentially meet the stated purpose and need, in direct violation of NEPA implementing regulations.

This is evident because, while every single alternative considered intersects with the Applicant's planned Bowie natural gas plant – a non-renewable energy source – the DEIS does not include a single alternative that intersects with the Afton Solar Energy Zone, which was identified through the BLM's own effort to identify areas for future renewable energy development.[56] This blatant omission certainly lends additional credence to the accusation that the agency and the applicant have misled the public as to the true purpose and need of this project, but if this is not the case, the public can then only assume that the BLM has failed to present a reasonable range of alternatives as mandated by NEPA.

Recommendation: According to NEPA implementing regulations, the purpose and need for this project must dictate the scope of reasonable alternatives presented in the DEIS. This is not the case with this project. If the purpose and need of this Project is to transmit primarily renewable energy, which seems to be the emphasis of both the agency and the applicant, then the scope of alternatives currently presented is clearly deficient and in violation of NEPA.

However, if the purpose and need is to simply increase transmission capacity for all types of energy, then the repeated statements and references to this project's potential to transmit renewable energy in the analysis must be removed, including the repeated rationale found throughout the DEIS that the negative environmental and economic impacts likely to result from this project will somehow be mitigated by an increase in renewable energy production. Either way, the DEIS does not meet the spirit or letter of NEPA as currently drafted and is inadequate.

[56] *See* Bureau of Land Management and U.S. Department of Energy. Final Programmatic Environmental Impact Statement (PEIS) for Solar Energy Development in Six Southwestern States, July 2012.

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5. The Cumulative Impacts Analysis Is Inadequate

6 The cumulative impacts analysis included in the DEIS is insufficient, particularly as it relates to the growing effects of climate change in this region. Under NEPA, BLM must take a "hard look" at the effects of proposed actions, including, "ecological, aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative."[57] A "cumulative impact" is one whose impact on the environment "results from the incremental impact of the Project when added to past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions."[58] Cumulative impacts "can result from individually minor but collectively significant actions taking place over a period of time."[59] In sum, the EIS must account for the direct, indirect, cumulative, and connected actions associated with the proposed transmission line.

When discussing the significance of an effect, the agency must consider both context and intensity, which includes determining "whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts."[60]

An EIS must "catalogue adequately the relevant past projects in the area."[61] It must also include a "useful analysis of the cumulative impacts of past, present and future projects," which requires "discussion of how [future] projects together with the proposed . . . project will affect [the environment]."[62] The EIS must analyze the combined effects of the actions in sufficient detail to be "useful to the decisionmaker in deciding whether, or how, to alter the program to lessen cumulative impacts."[63] "Detail is therefore required in describing the cumulative effects of a proposed action with other proposed actions."[64]

Recommendation: Cumulative impacts that must be considered as part of this draft EIS include 1) those impacts resulting from the construction of other transmission lines slated for this region, including the proposed Southline transmission line, which is recently released its notice of intent and conducted a public scoping process; 2) impacts resulting from other past, present and reasonably foreseeable linear utilities proposed for this region, including gas pipelines; 3) impacts from the development of wind, solar, natural gas, coal, and possibly geothermal generation plants that would otherwise not be feasible without the transmission access provided by this project; 4) impacts of existing and planned roads on BLM lands, state lands and other lands in the vicinity of this project that are already contributing to habitat fragmentation, regardless of the agency planning those roads; 5) impacts resulting from new infrastructure needed to accommodate construction workers such as roads or housing; and 6) impacts associated with climate change (see below).

A. Cumulative Impacts of Climate Change

[57] 40 C.F.R. § 1508.8.
[58] 40 C.F.R. § 1508.7 (emphasis added)
[59] 40 C.F.R. § 1508.7.
[60] 40 C.F.R. § 1508.27(b)(7).
[61] City of Carmel-by-the-Sea v. U.S. Dep't. of Trans., 123 F.3d 1142, 1160 (9th Cir. 1997).
[62] *Id.*
[63] *Id.* at 1160 (internal citations omitted).
[64] *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 810 (9th Cir. 1999). *See Also Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1998); *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1214-15 (9th Cir. 1998).

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6	Section 4.17.3.2 of the DEIS includes a comprehensive list and descriptions of past, present, future and reasonably foreseeable future activities within the cumulative analysis study areas. A useful analysis of the representative cumulative impacts for all resource categories was documented in Section 4.17.4 of the DEIS. The discussion of cumulative impacts of climate change was added to the FEIS as noted in response to Comment No.7.

Department of the Interior Secretarial Order 3226, as amended in 2001, requires BLM to "consider and analyze potential climate change impacts. . . . when making major decisions." Federal case law also underscores the responsibility of federal agencies to scrutinize reasonably foreseeable cumulative environmental impacts from carbon dioxide emissions involving coal-fired power generation through the NEPA review process.[65]

Recent warming in the southwest is the most rapid in the Nation and significantly more than global averages in some areas, with average temperatures in the region projected to rise by 2.5 to 5.5 degrees Fahrenheit by 2050.[66] In Arizona, winter precipitation is already becoming more variable with a trend toward both more frequent extremely dry and extremely wet winters.[67] On the global and national scale, precipitation patterns are shifting with more rain falling in heavy downpours that increase the risk of flooding.

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In addition, decadal-scale Pacific Ocean circulation persistence can result in long-term drought, which can drastically reduce water supplies, as demonstrated in the extremely dry conditions between 1999 and 2005 and during the 1950s. The Southeastern Planning Area and the Active Management Area as defined by the Arizona Water Atlas experienced a total departure from normal of -27.6 inches and -35.1 inches respectively for the time period 1940-1960. While the current drought may reflect precipitation conditions similar to those of the 1950s drought, temperatures during the last decade are almost 2 degrees higher, and this warming trend will affect the severity of drought.[68]

One of the most well documented impacts of climate change on wildlife is a shift in the ranges of species.[69] As animals migrate, landscape connectivity will be increasingly important.[70] Decommissioning roads in key wildlife corridors will improve connectivity and be an important mitigation measure to increase resiliency of wildlife to climate change.

Recommendation: The effects of climate change will not play out on pristine systems, but will interact with existing stressors on the landscape and will generally exacerbate impacts to natural resources, and reduce effectiveness of mitigation and reclamation efforts that fail to take climate change impacts into consideration. It will also increase the need for wildlife species to migrate in order to adapt to the changing climate, which highlights the importance of connectivity and maintaining functionality of wildlife corridors.

It is extremely important that the BLM consider the impacts associated with climate change as it conducts its cumulative impacts analysis for this project. Among other things, this includes the

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[65] *See Mid-states Coalition for Progress* v. *Surface Transportation Board*, 345 F.3d 520 (8th Cir. 2003) (finding NEPA violation by failing to consider emissions from increased coal consumption from new rail lines carrying coal); *Border Power Plant Working Group* v. *Department of Energy*, 260 F.Supp.2d 997 (S.D. Cal. 2003) (finding NEPA violation for failure to analyze reasonably foreseeable cumulative impacts from carbon dioxide with proposed transmission lines).

[66] Karl, T. R., J. M. Melillo, and T. C. Peterson (eds.). 2009. Global Climate Change Impacts in the United States. Cambridge University Press.

[67] *Id.*

[68] Arizona Department of Water Resources. 2009. Arizona Water Atlas. Accessed at http://www.azwater.gov/AzDWR/StatewidePlanning/WaterAtlas/Volume1ExecutiveSummary.htm

[69] Parmesan, C. 2006. Ecological and evolutionary responses to recent climate change. Annual Review of Ecology, Evolution, and Systematics 37: 637-669.

[70] Holman, I.P., R.J. Nicholls, P.M. Berry, P.A. Harrison, E. Audsley, S. Shackley, and M.D.A. Rounsevell. 2005. A regional, multi-sectoral and integrated assessment of the impacts of climate and socio-economic change in the UK. Part II. Results. Climatic Change, 71, 43-73.

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7	Comment noted. Currently, BLM does not have an established mechanism to accurately predict the effect of resource management-level decisions from this project-specific effort on global climate change. Expanded discussion of global climate change impacts in the Project area has been added to Section 4.17.1.2 as follows: "*With respect to the consequences for the climate of the Project area, federal and state land managers, scientists, stakeholders, and partners at an August 2010 workshop noted that climate change models for the southwestern deserts predict general warming and drying with increasing precipitation variability year to year, leading to increasing conflicts between competing water uses. Workshop attendees also agreed that increasing environmental stress is expected as a consequence of shifting ecosystem boundaries and species distributions, expansion of non-native species, and other potential effects leading to increasingly unstable biologic communities (Hughson et al. 2011).* *Record-setting wildfires are likely due to rising temperatures and related reductions in spring snowpack and soil moisture. Increased frequency and altered timing of flooding will increase risks to people, ecosystems, and infrastructure. Ozone pollution, which in many areas of the southwest increases as summer temperatures rise and clouds decrease, may also increase as a result of climate change. (US Global Change Research Program, 2012)* *More intense, longer-lasting heat waves will result in increasing demands for air-conditioning, depleting electrical generation and distribution capacity, resulting in increased risks of brownouts and blackouts. In addition, electricity supply will be affected by changes in the timing of river flows and where hydroelectric systems have limited storage capacity and reservoirs, since increased year-to-year variability of precipitation is expected. (US Global Change Research Program, 2012)*"

7 likelihood that the SunZia Project will carry non-renewable energy sources, such as coal, that produce significant GHG emissions.

Thank you for your consideration of these and all other relevant issues. Please continue to include SIA as an interested party on this matter and direct all future public notices and documents to Jenny Neeley, Conservation Policy Director & Legal Counsel, at the address above.

Sincerely,

Melanie Emerson
Executive Director
& Legal Counsel

Jenny Neeley
Conservation Policy Director

SKY ISLAND ALLIANCE
Protecting our Mountain Islands and Desert Seas

1912	Comment Response
	See following page(s)

1926

WILLOW SPRINGS RANCH

August 21, 2012

Via Electronic Mail to:
Bureau of Land Management
Adrian Garcia, BLM Project Manager
NMSunZiaProject@blm.gov

Re: Anam, Inc., Willow Springs Ranch, Nataros and Sacksen Family Comment on SunZia Project DEIS specifically in Pinal County, AZ

Dear Mr. Garcia:

The objective of the Bureau of Land Management ("BLM") as stated in the Executive Summary of the Draft Environmental Impact Statement ("DEIS") for the SunZia Southwest Transmission Project ("SunZia") is "to grant rights-of-way and to control their use on public lands in a manner that: (a) protects the natural resources associated with public lands and adjacent lands, whether private or administered by a government entity; (b) prevents unnecessary or undue degradation to public lands; (c) promotes the use of rights-of-way in common, considering engineering and technological compatibility, national security, and land use plans; and (d) coordinates, to the fullest extent possible, all BLM actions under the regulations in this part with state and local governments, interested individuals, and appropriate quasi-public entities."

We appreciate the fact that multiple alternative routes have been proposed and analyzed with the intent of choosing a superior route from eastern Pinal County to the termination of the project at the Pinal Central Substation. It is our intention to comment on a small portion of these routes specifically where they cross the 180,000 acre Willow Springs Ranch Property. These routes are part of Route Group 4 and include portions of Subroutes 4A, 4B, 4C1, 4C2a, and 4C2b. More specifically our concern relates to the "northern" route containing Link Identifier C620 (part of Subroutes 4A and 4B).

1 The owners of Willow Springs Ranch are strongly opposing any of the routes that contain Link Identifier C620 (western portion of Subroutes 4A and 4B). The 27 mile segment which is identified as C620 crosses pristine Scenic Quality Classification A land and contains no existing right-of-ways.

2 This would require substantial new temporary and permanent ground disturbance (approximately 153.9-162 acres). This could actually impact a larger land area than this as there is substantial steep topography along this route. Although we feel that the mitigation recommendations would be followed as stated in the DEIS, no one would be able to successfully mitigate the impact of opening

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Tucson, AZ 85704
520-742-7007
anaminc@anaminc.net

1926	Comment Response
1	Comment noted
2	The ground disturbance estimates account for varying terrain conditions that would add additional disturbance for wider road path construction in areas of steep slopes.

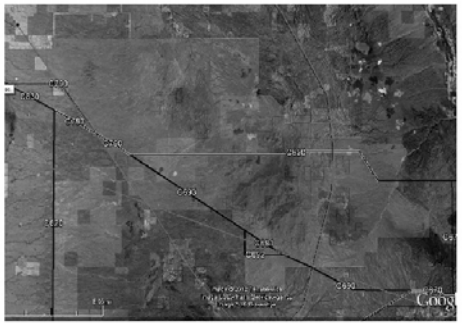
1926

WILLOW SPRINGS RANCH

3

up this area to increased public OHV access. Willow Springs Ranch is one of the most popular recreation areas in the state because of its proximity to the greater Tucson and Phoenix metropolitan areas. A new east to west corridor across this very scenic portion of the ranch would complete an internal loop within the boundaries of the existing ranch including off-road vehicle travel beyond the Project right-of-way.

The attached Google Earth diagram shows two major corridors of existing right-of-ways which are heavily traveled OHV routes through the Willow Springs Ranch (shaded in blue). There is an existing 500 kv transmission line operated by APS which opens up north south access near the eastern portion of the ranch (identified in red on the right of the map). Two smaller transmission lines operated by WAPA are shown in red on the southern and western boundaries of the ranch. A major gas line corridor (shown on Sunzia DEIS Map Volume Fig. M-10-4W_utilities, [not shown on map in this document]) follows Link Identifiers C690, c691, and C693 running from the southeast to the northwest thus affording easy access across the southern region of the ranch. Both of these corridors are major routes for OHV and other vehicular traffic.



4

The "northern" route identified by link C620 traverses north of Black Mountain which is identified in the DEIS (map M9-1W) as Scenic Quality Classification A. The C620 link bisects two of the largest tracts (Landscape Character Type 108) of Scenic Quality Classification A contained in the entire DEIS study area.

5

In order to be consistent with the BLM study objectives stated in paragraph 1, this route could be avoided by utilizing Crossover Links C671 or C174 if Subroutes 4A or 4B are ultimately chosen or continuing along Link Identifiers C690 or C680 if any of the Subroute alternatives for 4C2 are chosen. This would maximize the utilization of existing right-of-way corridors "containing existing utilities and access for construction of new transmission lines would more likely reduce the potential for such impacts [scenic degradation and opening up access] to occur."

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1926	Comment Response
3	Comment noted
4	Link C620 does not cross Class A scenery (Landscape Character Type 108). This link crosses Class B scenery associated with Landscape Character Types 203, 223, 225, and 235).
5	Comment noted

1926

WILLOW SPRINGS RANCH

In conclusion, we would like to commend you for your efforts in communicating with the public on the multiple issues that a project of this magnitude brings forward. Please consider our comments when the final route is chosen. If you require further clarification or would be interested in a site visit, please do not hesitate to contact us.

Respectfully submitted,

Joachim Sacksen, DVM
President-Willow Springs Cattle Co., Inc.
On behalf of the owners of Willow Springs Ranch

10134 North Oracle Road, Suite 100
Tucson, AZ 85704

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anaminc@anaminc.net

1926	Comment Response
	See following page(s)

1980

[redacted]

September 24, 2012

Bureau of Land Management
NM SunZia Transmission
attn. Adrian Garcia
PO Box 27115, Santa Fe,
New Mexico 87502

Dear Lead Agency,

1

In reviewing the current DEIS for the renewable energy powerline project, please revise to the original (2008) "Proposed Route" across New Mexico as "Preferred Alternative" for the eastern portion of the powerline. I specifically recommend Route numbers A181 and A300 (or alternately, A250) as the Proposed Route for the SunZia DEIS.

It is wisest to follow a path cutting diagonally west-southwest from the new sub-station, then skirting past the northwest corner of White Sands Missile Range property just south of Highway 380, and turning immediately south, following the WSMR boundary to the point where the line must head west in order to cross the Rio Grande just south of Arrey, NM.

Here are the reasons I request this route:

- It avoids all NWRs, WSAs, WAs, ACECs, and conservation easements.
- It avoids relatively populated agricultural and scenic areas.
- It avoids the low-altitude migratory avian flyway through Rio *bosques*.
- This eastern-end route is shortest, causing the least land disturbance.

I understand the military puts up various objections to accepting the proximity of the powerline following outside their western boundary. But that is not their land, they have no jurisdiction there, and they have caused us all anguish enough in their destructive use of the "proving grounds" for long over half a century. Thus, let us protect life along the middle Rio Grande to the maximum extent by favoring the above option in the final EIS.

Sincerely,

Kathryn Albrecht

San Antonio, NM, resident and

Officer, Rio Grande Agricultural Land Trust

1980	Comment Response
1	Section 2.3.3.1 of the DEIS describes alternative transmission line routes that were considered and eliminated. The southern routes (subroutes 1C1, 1C2 and 1C3) would cross either the wilderness study area that is excluded for new rights-of-way or the WSMR military lands.

1997

From: Kevin Dahl
To: BLM NM SunZia Project
Subject: comments on EIS
Date: Wednesday, August 22, 2012 3:17:49 PM

To Whom This May Concern

In reviewing the draft EIS, and after having attending both a scoping meeting and very poorly run public meeting (the one in Tucson when people asked for a public hearing and was denied this), I have concluded that this project doesn't meet the common sense test of whether it is needed. Originally proposed as an alternative energy project, it is clear that these routes have been selected to encourage the construction of natural gas powered plants, at least one of which has been proposed by some of the owners of the SunZia project. Bait and switch, so it seems.

1 Specifically, I am very glad that the difficult and environmentally-costly route through the Avra Valley has been eliminated from consideration. If it is resurrected, it would require more information and hearings close to the affected communities.

The routes through Tucson will cause all sorts of headaches, the San Pedro River Valley is an important habitat that shouldn't be disturbed by the proposed line, and the Aravaipa routing is a complete travesty. None of these should be allowed with only the flimsy reason of transporting fictional central New Mexico wind power to central Arizona. There is wind other places, and more importantly solar about everywhere, and the BLM should be spending its time better identifying those areas like old mining and agriculturally abused lands where solar should be sited. I would prefer the no-action alternative.

2 Also, I should point out that some other routings were suggested during the scoping process, including going through Globe or hooking up with east-west corridors farther north. I was disappointed that these were not considered in this EIS – and I wonder why. Perhaps because they didn't touch upon the Bowie area, where the proposed natural gas power plant would be located?

Thank you.

-Kevin

Kevin Dahl
Arizona Program Manager

National Parks Conservation Association
- *Protecting Our National Parks for Future Generations* -
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Tucson, AZ 85705
520.624.2014
520.603.6430 (cell)
kdahl@npca.org
www.npca.org

1997	Comment Response
1	Comment noted
2	The range of alternatives considered included potential transmission line routes that could provide electrical interconnections with renewable energy resources located primarily within the Qualified Resource Areas (QRAs) for wind energy, in south-central New Mexico, and the QRAs for solar energy located in southwestern New Mexico (e.g., BLM designated Afton Solar Energy Zone) and southeastern Arizona. Alternatives due west (through Globe) from the northern portion of the study corridors in New Mexico would not be practical or feasible to achieve this objective.

2005

From: Kitty Pokorny
To: BLM_NM_SunZia_Project
Subject: Sun Zia Project Comments
Date: Wednesday, August 22, 2012 8:28:44 AM

I am a board member for the Friends of the Bosque del Apache National Wildlife Refuge. In an effort to provide a united voice to protect the wildlife, habitat, and economic viability of the Rio Grande corridor, I would like to provide comments on the draft Sun Zia project for powerline routes in central New Mexico.

Route Determination

1 As stated in our comments during previous scoping periods, we oppose any route with an aerial crossing of the Rio Grande between Bosque del Apache National Wildlife Refuge and Ladd S. Gordon Waterfowl Complex, in particular the San Antonio crossings identified as the 1B subroutes and the current BLM preferred alternative. We disagree with the elimination of alternative routes that may minimize impacts on biological resources, in particular migratory birds. The WSMR Routes 1, 1a, and the unnamed route west of the Sierra Ladrones WSA and Sevilleta NWR were eliminated because they were deemed incompatible with management policies or plans. Likewise routes with a southern crossing, including 1C1, 1C2, 1C3, 2A, and 2B, were eliminated because the Department of the Army indicated that they would compromise their mission, and rights-of-way could not be granted without significant and economically infeasible mitigation measures. However, wildlife experts, including representatives of the Cooperating Agencies, have indicated that a river crossing in the vicinity of Belen or south of Elephant Butte would have less of an impact on migratory bird populations. Eliminating those routes prior to full evaluation and scoping presented unfair bias for the landowners involved and leaves too many questions as to the feasibility of those routes for meeting multiple needs of the stakeholders.

2 The Rio Grande corridor is part of the central fly way, which is one of four main routes migratory birds use to travel between winter and summer grounds. This needs to be protected, not obstructed! This area of the Rio Grande is heavily used by cranes, geese, bald eagles, and many other species for winter feeding, roosting and travel.

Land Use

3 More than 500 acres of conservation easements are in development or have been completed along the floodplain between Bosque del Apache NWR and Bernardo, the details of which have been given to SunZia by the Rio Grande Agricultural Land Trust. These land designations and restrictions are a glaring omission in the route analysis and must be fully evaluated and presented to the public, as well as the parties involved, before any routes are determined. Conservation easements take years of planning and implementation, but they are becoming a critical tool in restoration and preservation of our vulnerable habitats. Furthermore they promote collaboration between private landowners and non-profits or governmental entities for greater conservation goals. Diminishing the purpose and relevancy of these easements by crossing or otherwise impacting them would set back the progress that has been made in the Middle Rio Grande Valley.

Visual Resources

2005	Comment Response
1	Section 2.3.3.1 of the DEIS describes alternative transmission line routes that were considered and eliminated. The alternative routes located south of the Bosque or north of the Sevilleta National Wildlife Refuge were eliminated because they were not feasible. The southern routes would cross either wilderness study areas or military lands that were excluded for new rights-of-way. The northern routes were excluded because they would cross wilderness study areas or BLM exclusion areas. As stated "The WSMR also requested the evaluation of a route that would continue north of the Sevilleta NWR, heading west to avoid the Sierra Ladrones Wilderness Study Area (WSA) and the Ladron Mountain/Devil's Backbone Complex ACEC, before turning to the south and connecting with WSMR routes 1 and 2, west of the Rio Grande and south of the Sevilleta NWR. This route would not directly cross the Sevilleta NWR, but would cross a BLM right-of-way exclusion area and the Cibola National Forest. This (unnamed) route would be constrained to the east of the forest service land by the Sierra Ladrones WSA and the Sevilleta NWR, and located across the Cibola National Forest where there are no existing utility rights-of-way. According to the Cibola National Forest Land and Resource Management Plan, *"(where) no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way"* (1985). This route was eliminated because it would not be compatible with Cibola National Forest land management policies, and it would cross a BLM right-of-way exclusion area. Alternative Subroute 1A would fulfill a substantially similar function and purpose, as stated above."
2	Comment noted. Bird use of the central Rio Grande is discussed in the DEIS (throughout Section 3.6), Appendix B1, and Appendix B2.
3	A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.

2005

4 The visual impact of these power lines has been greatly underestimated. In an area where miles of the Rio Grande Valley are visible from I-25, as well as the myriad access roads to residences and recreation areas, these lines will be a steel wound bisecting our lush corridor and our community. The simulations don't give a full representation of the visibility of these towers, which at 100'-175', are taller than the Rio Grande cottonwoods (average height <90') that comprise the riparian corridor. Stating that the lines "would be partially screened by riparian vegetation" is not only inaccurate, but misleading as the vehicle river crossing is only one vista that will be marred by the presence of the lines. Furthermore, once a new corridor has been established, such as the preferred route northeast of Socorro, the door will be opened for other utilities or transmission lines to follow suit, further fragmenting our habitat and our viewscapes. Trying to quantify such subjective qualities as scenery and view belittles the value of the landscape to the people that call the area home and the thousands who visit each year to drive and bike our scenic byways, hike our backcountry, and photograph our sandhill cranes and snow geese as they fly down river at sunset over golden cottonwoods set against the stratified hills.

Environmental Justice and Economic Conditions

5 Environmental justice populations characterize Socorro County, and the fact that the density of those populations in immediate proximity to the power lines is low, doesn't mean that the entire county is not affected. From the small family farms struggling to maintain in multiple seasons of drought, to the small businesses seeking to build a tourism-based economy around outdoor recreation, our community is intertwined, and the ripple effect of this project will be widespread. Socorro County may not have a land use plan to reference, but the mission of the County to protect its trust resources and serve its people warrants consideration; however, the EIS has considered the needs of all other stakeholders first in the determination of alternative routes. It cannot be said that jobs for construction and operation of the transmission lines will directly benefit Socorro County, but it can be proven, as evidenced by the turnout at the public meetings, that the citizens are opposed to the lines in this area. Socorro County is being run over by this all-loss and no-gain project.

6

7 Whether it is threats to biological resources, compromises to restoration projects and conservation easements, or scars across the community, there are elements of this proposal that remain under-evaluated and stakeholders that remain underrepresented. This project cannot and should not be pushed through as proposed with the preferred alternative route or any San Antonio crossing. To plagiarize the conclusion of the WSMR regarding impacts of alternate routes through their lands, the BLM preferred alternative route north of Socorro or San Antonio crossings would cause "adverse effects that could not be economically mitigated."

Sincerely,

Cathryn Pokorny
1203 Avenida de Pajarito
Socorro, NM 87801

2005	Comment Response
4	For the DEIS, simulation locations were selected to show a range of impacts to viewing locations including residences, recreation areas, and travel routes throughout the study area. The DEIS discloses impacts to viewers including residences, recreation areas, and travel routes, in particular high impacts have been identified for recreation users of the Rio Grande river crossing (Link E180), as stated in Section 4.9.3.1 of the DEIS. Also the river crossing was identified as Class A high scenic quality, which would result in a moderate-high impact for the Project.
5	As indicated in Section 3.14 in the DEIS, EO 12898 (U.S. Department of Housing and Urban Development [HUD] 1994) requires federal agencies to address high and disproportionate environmental impacts on minority and low-income populations. Should potentially significant and adverse impacts attributable to the proposed Project fall disproportionately on these populations, environmental justice impacts would result. As noted in Section 4.14, Table 4-20 of the DEIS, High impacts occur in areas where the Project could create direct, long-term, and significant impacts to existing environmental justice populations. As stated in Section 4.14.2, although the type of impacts to rural and urban areas would be similar in most cases (e.g., the condemnation of a residence), the level of impact was also determined according to the proximity and density of the environmental justice population to the potential impact. As stated in Section 4.14.3.2 of the DEIS, moderate impacts would result within two of the Socorro County census tracts, and low impacts in two other census tracts for the BLM Preferred Alternative. The results indicate potentially higher and disproportionate impacts to urban areas, due to higher population densities in proximity to the Project.
6	Comment noted
7	Comment noted

2024

From: Leigh Ann Vradenburg
To: BLM_NM_SunZia_Project
Subject: Friends of the Bosque del Apache comments on the EIS
Date: Wednesday, August 15, 2012 5:30:25 PM
Attachments: SunZia-Comment_Friends of the Bosque del Apache.pdf

The comments of the Friends of the Bosque del Apache National Wildlife Refuge are shown below and included on the comment form attached. Please note that the comments on the form exceed the space provided and will not be shown completely in printing. For printed comments please reference the body of this email.
Thank you,

Leigh Ann Vradenburg
Executive Director
Friends of the Bosque del Apache NWR
P.O. Box 340
San Antonio, NM 87832
friends@sdc.org
www.friendsofthebosque.org
575-838-2120
575-838-2959 (fax)

On behalf of the Friends of the Bosque del Apache National Wildlife Refuge I would like to provide comments on the Draft Environmental Impact Statement and Resource Management Plan specifically as it relates to route determination and the biological and visual resources, land use, environmental justice and economic conditions affected by Route Group 1 in New Mexico.

Route Determination

[1] As stated in our comments during previous scoping periods, we oppose any route with an aerial crossing of the Rio Grande between Bosque del Apache National Wildlife Refuge and Ladd S. Gordon Waterfowl Complex, in particular the San Antonio crossings identified as the 1B subroutes and the current BLM preferred alternative. We disagree with the elimination of alternative routes that may minimize impacts on biological resources, in particular migratory birds. The WSMR Routes 1, 1a, and the unnamed route west of the Sierra Ladrones WSA and Sevilleta NWR were eliminated because they were deemed incompatible with management policies or plans. Likewise routes with a southern crossing, including 1C1, 1C2, 1C3, 2A, and 2B, were eliminated because the Department of the Army indicated that they would compromise their mission, and rights-of-way could not be granted without significant and economically infeasible mitigation measures. However, wildlife experts, including representatives of the Cooperating Agencies, have indicated that a river crossing in the vicinity of Belen or south of Elephant Butte would have less of an impact on migratory bird populations. Eliminating those routes prior to full evaluation and scoping presented unfair bias for the landowners involved and leaves too many questions as to the feasibility of those routes for meeting multiple needs of the stakeholders.

Biological Resources

[2] The Analysis of Potential Avian Collisions with Transmission Lines at Four Locations on the Rio

2024	Comment Response
1	Comment noted. Criteria for the evaluation of alternatives considered but eliminated is described in Section 2.3.3 of the DEIS, "According to the BLM NEPA handbook, an alternative may be eliminated from detailed analysis if (1) it is ineffective (it would not respond to the purpose and need); (2) it is technically or economically not feasible; (3) it is inconsistent with management objectives for the area (i.e., does not conform with land use plans); (4) its implementation is remote or speculative; (5) it would be substantially similar in design (function and purpose) to another alternative already analyzed; and (6) it would have substantially similar effects to another alternative already analyzed."
2	Although the BLM preferred alternative crossing location of the Rio Grande was not identified at the time that fieldwork for the bird collision risk study was performed, the study conducted by the University of New Mexico represents the best available information at this time. Mitigation measures to minimize the collision risk for all birds will continue to be considered, and the selection and placement of those mitigation measures will be identified in an Avian Protection Plan.

Grande in New Mexico cited in the EIS presented only a snapshot of bird use in the corridor. Sixty-four surveys, or approximately 32 site-days, at the San Antonio North site is a poor sample size to try to quantify effects on a susceptible population such as the Rocky Mountain Population (RMP) sandhill cranes, especially given that some of the sampling period fell prior to their arrival in the region. The variability in the counts per hour and flight height between the San Antonio North and South sites makes predictions for the preferred route, which was not studied, impossible. Data from the San Antonio North site for the August to December 2010 period indicate an average flight height of 47.97 meters, or roughly 157 feet. This flight level is within the proposed range of tower heights, 100'-175', and slightly above the mean height of 135'. Given that cranes are especially susceptible to collisions rising from or descending to feeding or roosting areas, their daily movements between Bosque del Apache NWR and the Ladd Complex will put them in constant danger.

2 The variability in flight data between the two sampling periods brings the fatal collision estimates into question. The fact that cranes are exposed to other threats, including multiple power lines, throughout their distribution, should not be used as justification to add to their challenges. Energetically, winter is a difficult time for these birds, and safe movement up and down the Valley is a key component in maintaining body condition and preparing for upcoming life cycle requirements. As stated by Rod Drewein, the Middle Rio Grande Valley is the most important landscape in the annual life cycle of the RMP cranes. This fact alone should elevate the required level of research and analysis of any proposed landscape modification in the Valley.

Cranes are of concern, but impacts aren't restricted to that species. All birds and bats must be protected. If there are conflicts between lowering towers to reduce crane collisions and raising towers to prevent habitat disturbance that would affect Southwestern willow flycatchers, then more research is warranted and the route needs to be relocated to other sites determined to be of less impact on all avifauna. Bird diverters are an oversimplified solution to a much greater placement issue.

Land Use

3 More than 500 acres of conservation easements are in development or have been completed along the floodplain between Bosque del Apache NWR and Bernardo, the details of which have been given to SunZia by the Rio Grande Agricultural Land Trust. The EIS Section 4.17.3.2 indicates that conservation easements are covered in Section 3.10 under the past and present activities and land uses within the study area, but there is no mention of any conservation easements in our region. These special land designations and restrictions are a glaring omission in the route analysis and must be fully evaluated and presented to the public, as well as the parties involved, before any routes are determined. Conservation easements take years of planning and implementation, but they are becoming a critical tool in restoration and preservation of our vulnerable habitats. Furthermore they promote collaboration between private landowners and non-profits or governmental entities for greater conservation goals. Diminishing the purpose and relevancy of these easements by crossing or otherwise impacting them would set back the progress that has been made in the Middle Rio Grande Valley.

Visual Resources

2024	Comment Response
3	A discussion of conservation easements along the Rio Grande and elsewhere in the project study corridor has been added to the FEIS, Section 3.10.3.3, Conservation Easements, in Chapter 3.

2024

4 The visual impact of these power lines has been greatly underestimated. In an area where miles of the Rio Grande Valley are visible from I-25, as well as the myriad access roads to residences and recreation areas, these lines will be a steel wound bisecting our lush corridor and our community. The simulations don't give a full representation of the visibility of these towers, which at 100'-175', are taller than the Rio Grande cottonwoods (average height <90') that comprise the riparian corridor. Stating that the lines "would be partially screened by riparian vegetation" is not only inaccurate, but misleading as the vehicle river crossing is only one vista that will be marred by the presence of the lines. Furthermore, once a new corridor has been established, such as the preferred route northeast of Socorro, the door will be opened for other utilities or transmission lines to follow suit, further fragmenting our habitat and our viewscapes. Trying to quantify such subjective qualities as scenery and view belittles the value of the landscape to the people that call the area home and the thousands who visit each year to drive and bike our scenic byways, hike our backcountry, and photograph our sandhill cranes and snow geese as they fly down river at sunset over golden cottonwoods set against the stratified hills.

5 Environmental Justice and Economic Conditions
Environmental justice populations characterize Socorro County, and the fact that the density of those populations in immediate proximity to the power lines is low, doesn't mean that the entire county is not affected. From the small family farms struggling to maintain in multiple seasons of drought, to the small businesses seeking to build a tourism-based economy around outdoor recreation, our community is intertwined, and the ripple effect of this project will be widespread. Socorro County may not have a land use plan to reference, but the mission of the County to protect its trust resources and serve its people warrants consideration; however, the EIS has considered the needs of all other stakeholders first in the determination of alternative routes. It cannot be said that jobs for construction and operation of the transmission lines will directly benefit Socorro County, but it can be proven, as evidenced by the turnout at the public meetings, that the citizens are opposed to the lines in this area. Socorro County is being run over by this all-loss and no-gain project.

6 Whether it is threats to biological resources, compromises to restoration projects and conservation easements, or scars across the community, there are elements of this proposal that remain under-evaluated and stakeholders that remain underrepresented. This project cannot and should not be pushed through as proposed with the preferred alternative route or any San Antonio crossing. To plagiarize the conclusion of the WSMR regarding impacts of alternate routes through their lands, the BLM preferred alternative route north of Socorro or San Antonio crossings would cause "adverse effects that could not be economically mitigated."

2024	Comment Response
4	The statement that the project would be partially screened by vegetation is an accurate statement as demonstrated by the simulation. Clearing would occur at the crossing; however, due to existing vegetation that surrounds the project crossing the lower portion of the transmission line would be screened from the agency and approved KOP (viewpoint for simulation). Visual impacts were identified for the Rio Grande crossing KOP, as illustrated on Map 9-2E.
5	As indicated in Section 3.14 in the DEIS, EO 12898 (U.S. Department of Housing and Urban Development [HUD] 1994) requires federal agencies to address high and disproportionate environmental impacts on minority and low-income populations. Should potentially significant and adverse impacts attributable to the proposed Project fall disproportionately on these populations, environmental justice impacts would result. As noted in Section 4.14, Table 4-20 of the DEIS, High impacts occur in areas where the Project could create direct, long-term, and significant impacts to existing environmental justice populations. The methodology of assessing impacts to environmental justice populations was applied consistently within rural and urban areas. As stated in Section 4.14.2, although the type of impacts to rural and urban areas would be similar in most cases (e.g., the condemnation of a residence), the level of impact was also determined according to the proximity and density of the environmental justice population to the potential impact. For example, rural residential properties could experience moderate impacts from a distance of two miles of the transmission lines, while a residence just outside a mile from the lines could experience low impacts because of the existing lines or the presence of other structures commonly associated with a built urban environment. For these reasons populations within a 3-mile buffer are more likely to be affected by the Project (higher impacts occur up to a distance of three miles; noise and visual impacts dissipate at greater distances). Census tracts provide the most meaningful geographic unit to measure population components within the area of potential effects in rural areas, but the impacts are assessed according to inhabited structures within proximity to the Project corridor's centerline. The results indicate higher and disproportionate impacts to urban areas, due to higher population densities in proximity to the Project. The results of the analysis of social and economic impacts are described in Section 4.13 Social and Economic Conditions. Direct and indirect economic impacts are identified for New Mexico in Section 4.13.4.3 of the DEIS. It is estimated that between 1,419 and 1,488 direct and indirect jobs could be generated from construction and operation of the transmission lines within Route Group 1. It is estimated that Socorro and Sierra counties would benefit the most in Route Group 1, because they contain the majority of subroute mileage.
6	Comment noted

2100

Southwest Office
110 South Church, Suite 4292 | Tucson, AZ 85701 | tel 520.623.9633 | fax 520.623.0447
www.defenders.org

August 22, 2012
Adrian Garcia, Project Manager
Bureau of Land Management
SunZia Southwest Transmission Line Project
P.O Box 27115
Santa Fe, NM 87502-0115
Via electronic mail to NMSunZiaProject@blm.gov
Re: Comments on Proposed SunZia Transmission Project DEIS

Dear Mr. Garcia:

Defenders of Wildlife (Defenders), the Coalition for Sonoran Desert Protection, Sky Island Alliance and Tucson Audubon appreciate the opportunity to provide comments on the Draft Environmental Impact Statement (DEIS) for the proposed SunZia Southwest Transmission Line Project (SunZia).

Defenders is a non-profit conservation organization dedicated to the protection of all native animals and plants in their natural communities, with over a million members and supporters nationwide, including over 12,200 members in Arizona and New Mexico.

SunZia proposes to construct two parallel high capacity 500-kilovolt (kV) transmission lines that would span between 460 and 542 miles across federal, state, and private lands between central New Mexico and central Arizona. The Bureau of Land Management (BLM) is the lead federal agency for this project, while the project applicant, SunZia Transmission, LLC is a private company.

Transforming the nation's electricity sources from polluting fossil fuels to clean renewable energy is an essential part of reducing greenhouse gas emissions and limiting the threats posed by global climate change. Defenders is committed to guiding our nation's transition to clean energy in a way that protects wildlife and habitats by ensuring renewable energy and transmission projects are built "smart from the start" so as to avoid, minimize and effectively mitigate for negative impacts to our environment, wildlife habitat and other sensitive resources.

We recognize that new transmission lines will be needed in some cases to carry renewable energy to population centers, and create improved transmission capacity and reliability. However, renewable energy and associated transmission development are not appropriate everywhere on the landscape. Thorough review under the National Environmental Policy Act of 1969 (NEPA) and state line-siting regulations and processes are essential to determining which of the many proposed projects should be permitted to go forward. Especially close scrutiny is warranted when proposed new transmission lines would impact areas of high conservation value.

When new transmission lines are proposed, they must serve a true need, and be appropriately located to avoid or minimize harm to wildlife, wildlife habitat, wilderness values, and other important natural and cultural resources. Upon review of the DEIS for SunZia, we do not believe that any of the alternative routes are located so as to sufficiently avoid or minimize impacts to sensitive wildlife habitats and resources. The numerous negative impacts of the project to areas of high conservation value outweighs the purported benefits of the project, and therefore it should not be permitted as currently conceived.

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I. Public Process Has Lacked Transparency and Effective Public Engagement

SunZia is a highly controversial project. We are concerned with the quality and nature of the public process that has been conducted by the BLM for the SunZia project to date, which has lacked transparency and effective public engagement. BLM held several public meetings in response to the controversial nature of the project.[1] However, the format of the meetings has not allowed for meaningful public discourse on important issues and questions, and as such has not been in keeping with the spirit and intent of NEPA. As an example, during the public meeting held in Tucson on July 17, 2012, numerous local stakeholders felt compelled to ask questions and voice their concerns openly regarding the purpose and need of the project for renewable energy transmission. Instead of engaging with the public and answering their questions or accepting comments in this format, BLM staff moved across the room out of range of the public questioners. Such a response does not meet NEPA's intent to provide meaningful public involvement in major environmental decision-making. Crucially, BLM's response in this case also did little to reduce public controversy and opposition to the project, but instead caused increased tension and conflict, which will likley cause further delays in the process and cause stakeholders to continue to question the project.

2 Defenders, along with partner organizations, anticipated that due to its highly controversial nature and potential for extensive impacts, SunZia merited a proactive, collaborative conflict resolution approach. Therefore, on May 13, 2011, we sent a letter to Secretary of Interior Salazar strongly recommending that he direct BLM to engage the U.S. Institute for Environmental Conflict Resolution (USIECR) with affected stakeholders (see attached copy of this letter). Our hope was that the USIECR would assist BLM and SunZia in identifying and resolving outstanding conflicts associated with SunZia prior to the release of the project's DEIS. Unfortunately, Secretary Salazar did not respond to our letter and did not direct BLM to engage USIECR, nor was there any other conflict-resolution process initiated. As a result, there remain numerous significant, unresolved conflicts expressed by the public surrounding SunZia, and a commensurate decrease in the confidence in the integrity of the public process. Until such a conflict resolution process is successfully undertaken, or new alternatives with significantly less conflict are identified, we will continue to advocate BLM select the "no action alternative".

3 **Recommendations:** We encourage the BLM to select the "no action alternative". However, if BLM selects an action alternative, we encourage the BLM and SunZia to consider the following recommendations. BLM should provide additional opportunities for meaningful public engagement leading up to the Final EIS, so as to comply with the intent and purpose of NEPA. Issues and input gathered from such public engagement should be used by BLM to inform and guide its decision making process. BLM should consider engaging the USIECR or other professional mediators to ensure productive communication and increase the likelihood of resolving outstanding conflicts.

[1] "Public meetings or hearings are required when there may be substantial environmental controversy concerning the environmental effects of the proposed action [or] a substantial interest in holding the meeting" (BLM NEPA Handbook H-1790-1 § 6.9.1)

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3	The DEIS was made available for public review and comment on May 25, 2012. The BLM held ten public meetings and scheduled a 90-day public comment period that ended on August 22, 2012. In total, the public scoping for the SunZia project has included a total of 22 public meetings and 255 days of public comment. A 45-day public comment period is generally the time provided for a DEIS. The BLM's planning regulations and guidance require a minimum 90-day public comment period for land use plan amendments. The SunZia project may involve several BLM land use plan amendments thus the 90-day comment period was provided. The SunZia DEIS comment period meets BLM requirements and affords interested parties opportunity and time to review the document and submit substantive comments. In addition, the BLM regulations implementing the National Environmental Policy Act regulations require that all substantive comments received before reaching a decision must be considered to the extent feasible. This means that substantive comments received after the 90-day comment period have also been considered before the Final EIS was issued.

II. We Support the No Action Alternative because proposed routes would adversely impact ecologically sensitive areas and wildlife resources

4 Defenders is unable to support any of the DEIS action alternatives due to unacceptable impacts to sensitive wildlife habitats and wild lands; therefore, we support the "no action alternative".

In our scoping comments, submitted on June 10, 2010, we clearly stated that any proposed routes through the San Pedro River Valley or Aravaipa Canyon were unacceptable due to high levels of ecological sensitivity, and we requested that they be removed from further consideration. Not only were these areas not removed from consideration in the DEIS, but a new route not disclosed in the scoping process, located on the western side of the San Pedro River Valley, has been put forward as the BLM's "preferred alternative".

As detailed in our scoping comments, the San Pedro River Valley is a globally significant area that is a well-documented migratory corridor for birds and other wildlife, and it contains designated critical habitat for several endangered species. Substantial public and private conservation investments have been made in the area. It is an area so special and ecologically valuable that it has recently been proposed by the U.S. Fish and Wildlife Service for the establishment of a new National Wildlife Refuge and Collaborative Conservation Initiative[2] - an effort "involving interested landowners, land managing agencies, local communities, nonprofit organizations, businesses and the public who share a vision of a healthy river system contributing to people's livelihoods and a functioning, hydrologically healthy riparian corridor that supports a diverse and rich nature flora and fauna." The preferred alternative would run astride this new wildlife refuge, and in close proximity to the Saguaro National Park (east unit). This is not an appropriate area through which to route a major new energy corridor.

Also as detailed in our scoping comments, the greater Aravaipa-Galiuro-Santa Teresa wild land complex is similarly unsuitable for such development and resulting habitat fragmentation. According to a cumulative effects analysis recently conducted by The Nature Conservancy (TNC)[3], this wild land complex is second only to the Grand Canyon region in the Southwest in terms of its size and relative intactness. The TNC cumulative effects analysis states:

> *The take home from these analyses is that the Sunzia transmission route proposed to cross the Galiuro-Aravaipa-Santa Teresa area would split in half the second largest unfragmented landscape remaining in the southwestern U.S. and introduce habitat disturbance into an area where, for example, there are no paved roads and no roads that cross over the axis of the Galiuros from Aravaipa Valley to the San Pedro River Valley, or from Aravaipa Valley over the Santa Teresas into the Gila River Valley. With the Southwest's largest remaining intact area, the Grand Canyon, already in protected status, it raises the question of whether mitigation measures are even possible for disturbances to the region's second largest intact landscape.*

[2] U.S. Fish and Wildlife Service Lower San Pedro River Collaborative Conservation Initiative Planning Update #1: http://www.fws.gov/southwest/docs/LSPRCIPlanningUpdate1.pdf

[3] Cumulative Effects Analysis for Proposed SunZia Transmission Line. Rob Marshall, Dale Turner, and Dan majka, The Nature Conservancy, June 18, 2012.

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A major transmission corridor and associated access roads through this wild and remote area would not only fragment and create a new disturbance corridor in this large, unique and unbroken natural area, it could also open it up to future undesirable development proposals, and potentially preclude or discourage the active fire management crucial to maintaining ecosystem processes and healthy wildlife habitats. This is not an appropriate area through which to route a major new energy corridor.

As documented in the DEIS, the proposed SunZia line and associated infrastructure would potentially negatively impact a wide range of sensitive, threatened and endangered species and their habitats, including designated critical habitat for several species. While in some cases impacts could be avoided and minimized through project design, best management practices and mitigation measures, there are also unavoidable and cumulative impacts that are collectively unacceptable and which would be impossible to adequately mitigate for in some areas.

Importantly, the DEIS documents numerous federal, state, county and private conservation lands, and important bird areas and wildlife linkages that would be negatively impacted by the various alternatives. In addition to the host of special areas of conservation concern identified in the DEIS that would be directly or indirectly impacted, there are fourteen roadless BLM parcels in New Mexico greater than 5,000 acres containing wilderness characteristics and values that would be potentially affected by SunZia under the various proposed action alternatives. The construction of such highly visible, permanent man-made structures and access roads would significantly degrade the wilderness characteristics and values of these areas and potentially preclude them from future wilderness designation. Such impacts to public wild lands are also unacceptable and impossible to adequately mitigate for. 5

A new transmission line corridor and associated new or improved access roads would not only fragment currently undisturbed wildlife habitat and impair the functionality of wildlife linkages and migration corridors, it could also facilitate the introduction and spread of invasive species, cause increased erosion and sedimentation, as well as provide a new avenue for unauthorized motorized activity and associated disturbances.

The DEIS (4-424) projects that 4,500 MW of new generation capacity empowered by SunZia would result in the disturbance of approximately 40,270 acres of land. New power generation facilities are likely to be located within the vicinity of current and future substations along the line. We are concerned about the scale of cumulative impacts to the surrounding wild lands and wildlife habitats along the proposed routes and in proximity to them (see section IV for more details on wild lands of concern).

Recommendations: We encourage the BLM to select the "no action alternative". However, if BLM selects an action alternative, we encourage the BLM and SunZia to consider the following recommendations. Lands of conservation significance and ecological sensitivity should be avoided to the greatest extent possible. New transmission lines can and should be constructed along existing disturbance corridors in order to avoid intrusion into undisturbed wild lands and wildlife habitats. In addition, in some cases existing transmission lines can be upgraded, eliminating the necessity of establishing new right of way corridors and associated disturbance to wildlife and wild lands. 6

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5	Per guidance in Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310), all BLM lands with proposed applications need to be inventoried to identify lands with wilderness characteristics, which would support a citizen's wilderness inventory proposal. Within the SunZia study corridors, the Nutt Mountain LWC unit in New Mexico was identified based on the manual (MS-6310), and would be crossed by one of the SunZia transmission line alternative routes (not the Preferred Route) Also as stated in the FEIS as follows: "According to the current inventory conducted in *October 2012, the Preferred Route would cross an LWC unit that was identified, located adjacent to the Stallion WSA*."
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III. We Support the No Action Alternative because SunZia would facilitate the production and transmission of significant amounts of new fossil fuel-generated energy.

In our scoping comments, authored with partner conservation organizations and submitted to the BLM on June 10, 2010, we questioned whether SunZia would actually be primarily a line for clean renewable energy resources, as scoping materials stated it would be, or if it would instead primarily facilitate the development of new fossil fuel-generated energy. This important issue, the mix of renewable vs. fossil fuel energy that SunZia is likely to carry, has been raised repeatedly by the public, but has not been transparently addressed in the public meetings hosted by the BLM, nor do we believe it has been accurately evaluated or disclosed in the DEIS.

7 The energy development forecast in the DEIS which estimates that between 81-94% of the energy SunZia would spur (and presumably carry) would be renewable appears to overestimate the mix of renewable energy likely in the foreseeable future, while fossil fuel sources of energy that are anticipated to feed into SunZia appear to be significantly underestimated. Up to one third of the 3,000 MW approved rating for a two single-circuit 500 kV AC line configuration would be occupied by electricity generated by the 1,000 MW Bowie gas-fired power plant alone. Ironically, SunZia does not intersect with and thus will not carry energy from the BLM's Afton Solar Energy Zone and associated substation near Las Cruces, New Mexico. However, SunZia does connect with the natural gas-fired power plant and Willow substation, near Bowie, Arizona, and other gas-fired power plants and substations along the I-10 corridor. Thus the purpose and need as stated by the BLM in scoping materials for this project, as well as information provided at public meetings and in the energy development forecast in the DEIS, give a false impression of the likely ratio of fossil-fuel to renewable energy development the line is likely to enable and carry.

IV. The Stated Purpose and Need for the SunZia Project is Misleading and Incomplete

The purpose and need of the SunZia project, as portrayed by BLM in both its scoping materials and in recent presentations at public meetings, is a transmission line that would be constructed to carry "primarily renewable energy sources."

An Information Quality Act request from the Winkelman and Redington Natural Resource Conservation Districts in Arizona submitted in July 2011 requested that BLM prepare a more accurate statement of purpose for the SunZia Southwest Transmission Project. In response, BLM did ultimately drop the word "primarily" from its purpose and need statement – but only as recently as April of 2012. While the word "primarily" was not used in presentations at recent public meetings held by BLM, the presentations at these meetings, given by the consultant Environmental Planning Group (EPG) hired by BLM, focused almost exclusively on the project's potential to serve renewable energy development. The words "natural gas" or "fossil fuels" were not included in the project's statement of purpose and need or in public presentations, despite the project's clear linkage to natural gas development proposals.

When the Southwestern Power Group (SWPG), the primary investor in the SunZia project, officially proposed SunZia, its presentations made clear that its driving motivation was to provide needed

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7	Scoping newsletters note the project proponent's intent for the SunZia Project to facilitate renewable energy projects. As the Draft EIS for the SunZia project notes, the line, if built, would be subject to FERC Order 888 which requires owners of transmission facilities to offer services on a non-discriminatory basis. It is therefore not possible to guarantee that energy carried on the line, if approved, would derive exclusively or primarily from renewable energy sources. Table 1-1, Renewable Energy and Transmission Capacity Needed to Meet RPS, and Table 1-2, Summary of Generation Interconnection Requests to Existing Transmission Owners within the Project Area, illustrate, respectively, a need for additional renewable generation sources and a need for transmission capacity. Several alternative routes connecting New Mexico and central Arizona were evaluated in the siting studies for the proposed SunZia 500 kV transmission lines conducted during the scoping process. Some of the alternatives (including the Preferred Alternative) were co-located along the existing TEP 345 kV transmission line corridor, which is considered a siting opportunity for new transmission lines. The Bowie Power Station site is located approximately 15 miles from the TEP 345 kV transmission line corridor, where it was permitted to interconnect with the existing TEP transmission system at the Willow-345 kV substation. The Afton Solar Energy Zone (SEZ) (designated in the Final PEIS for Solar Energy, July 2012) is located within the NMSO Qualified Resource Area (QRA) as shown on Figure 4-3 of the DEIS. As part of the purpose and need of the SunZia Project, the Midpoint Substation would be a potential interconnection point for future solar energy development projects that may be located within this QRA, including the Afton SEZ. It is noted there is an existing 345kV transmission line between the Afton SEZ and the Midpoint Substation, as shown on Figure 4-1 of the DEIS.